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HISTORY AND EVOLUTION

A. L. KROEBER

I

LESLIE A. WHITE'S recent stimulating paper in this journal on *History, Evolutionism, and Functionalism*[1] adds "evolutionism" as a third method to the well-recognized ones of "history" and "science." Some of what White describes as evolutionistic approach seems to the present writer plainly historical, as will be set forth. The residuum after subtraction of this element is less easily characterized, and will then be examined.

White recognizes three "processes"[2] in culture, to which correspond three "interpretations." These are: Temporal, concerned with chronological sequence of unique events, yielding history; Formal, non-temporal but structural-functional, leading to science; Temporal-formal, temporal sequence of forms, "the interpretation of which is evolutionism." This is on the face of it reasonable enough; but definition of historical treatment as being merely concerned with unique events in their chronological sequence is too narrow. It suggests an annalistic conception of history, such as not even political historians, let alone historical biologists, would accept as a frame. The setting of White's remarks

1 Volume 1, pp. 221-248, 1945.

2 "Processes in culture" (p. 221) presumably means processes in phenomena, and it seems doubtful whether separate temporal, formal, functional, etc., *processes* may properly be recognized as *residing* in the phenomena. They appear rather to be separate aspects from which we can view, approach, and analyze the same phenomena; in which case White has dragged in an unnecessary assumption that might be hard to defend. Adjudication of the point should probably be made by minds more trained in formal philosophy than most anthropologists, whose methodological theories tend to be an outgrowth of their concrete preoccupations with culture. Among ourselves, accordingly, it is only reasonable and fair that we should go by intent of meaning; which in this case I construe to be "aspect" or "approach," viz. process in our study, rather than process in the phenomena.

about uniqueness, and his exemplifications, suggest that for him that quality carries also an implication of isolability, in fact of isolation, of the facts dealt with. Thus he speaks of a "chronological sequence of events, each of which is regarded as unique,"[3] where "unique" seems to include also "discrete." Certainly most of his examples suggest that he regards the facts of what he calls "history" as essentially discrete and perhaps unrelated. The biologist interested in the history of man "wants to know where and when certain physical types—Bushmen, Pygmies, Ainu, Nordics—appeared, where they migrated and when, with whom they intermarried, and so on."[4] Customs have a history because each "originated at a certain time and place and diffused subsequently to certain places at definite times."[5] This is contrasted with the temporal-formal or evolutionistic approach, "in which an organization of functionally interrelated elements is temporarily transformed, in which one form grows out of an antecedent form and into a subsequent form."[6]

Most scholars would call this last, history: pure history. What else would any history of the French Revolution be than just this, the recording of how "one form grows out of an antecedent form"? All history—whatever the field—which is worth its salt does deal with relations, with functions, with meanings. It certainly is not a tracing of the wanderings of detached and unrelated items through time and space, nor a precise but arid roster of names, dates, and places. In biology, again, White contrasts the "history of species, varieties, etc." with the "evolution of life, of species."[7] This suggests that the story of how life diverged into phyla and orders, how genera and species originated and how they are related to one another, is the concern of the "evolutionist"; but the historian begins with a species as already given, as something isolated and distinct, whose wanderings and breaking up into subspecies he then traces with the absorption of an antiquarian uninterested in major relevances.

White thus does "history" the signal but dubious honor of appropriating all that is most vital and significant in it and assigning it to evolutionism. The motivation of the imbalance is obvious: the foster-child needs *Lebensraum*. If he claimed the whole of the historical domain for "evolutionism," I should not particularly quarrel: the change would be nominal, like that of a color on a map. But it will not do to gut history and leave its empty shell standing around; there might be the embarrassment of no one claiming it.

The attitude is strangely reminiscent of that of Radcliffe-Brown, who how-

3 Page 235.
4 *Loc. cit.*
5 Page 236.
6 Page 237.
7 Table, p. 243.

ever differs in wanting to develop a physics or physiology, that is, a generalizing science, for society—though not, except perhaps grudgingly, for culture, which seems to be only a sort of set of rules that somehow got attached, without too much significance but rather distractingly, to society.[8] Radcliffe-Brown is fully aware of the dichotomy of science and history, and in principle allows the latter its place in the sun. But history to him is of two kinds. One is unverifiable speculation as to ultimate origins, which he charges with being an "Illusion of Historical Explanation." Presumably everyone nowadays would agree with this verdict; though one might strengthen it by rewording the error as "the illusion of explanation by pseudo-history." Radcliffe-Brown's "other kind of history is that of the historians, who examine actual records of past events" in order to "determine with fair probability the real order of events."[9] This seems to mean that when history is not illusory it is restricted to using documents to ascertain chronology. Radcliffe-Brown seems as innocent as White of realizing that history is always interpretative, in its own way; is therefore concerned with functional relations; is in its very nature reconstructive; and can never long dispense with interpretations. This is as true of the "history of historians" as of culture-historians, archaeologists, palaeontologists, other historical biologists, and geologists. I do not know the motivation for Radcliffe-Brown's depreciation of the historical approach, unless that, as the ardent apostle of a genuine new science of society, he has perhaps failed to concern himself enough with history to learn its nature.

Malinowski was a conscious, petulant, and versatile aggressor. In his famous article on "Culture" in the *Encyclopaedia of the Social Sciences* he tried to provide anthropology with a foundation of his making, an aprioristic closed system of theory, analogous to classical economic theory in economics. Anything as empirical and fluid as history, of course, would not fit at all into such a system; so he proceeded to belittle history away—at least the history of nonliterate cultures; there was more to be gained by ignoring than by attacking the history of the historians. The way of belittling was to charge the historical approach with operating through irrelevances, fortuities, and absences of knowledge;[10] and deliberately to bracket the names of the most critical and least critical followers of the historical method in anthropology.[11] Malinowski was

8 I hope to return in another connection to this really strange view.

9 I am citing from "The Development of Social Anthropology," a mimeographed lecture at the University of Chicago, Dec. 1, 1936; but Radcliffe-Brown has expressed the same views repeatedly.

10 *Encyclopaedia of the Social Sciences*, art. "Culture," p. 624.

11 Boas with Elliot Smith, Wissler with Graebner: same, p. 624.

agile and presumably knew what he was doing. But there remains his astounding implication that history deals with events of no significance[12] and of no relation (except, perhaps, the external one of time)—whereas in fact all real history is nothing but an interpretation by means of description in terms of context.

It seems fit to consider how eminent scholars can solemnly and premeditatedly maintain such a remarkable view.

First, presumably, they have not really read much of either ordinary history, or culture history, or biological history, and therefore know little or nothing about them by personal experience, and have been uninterested in appraising the nature of what they have read.

Next, so far as they are Americans, they belong to a nation which in virtue of recent migration has an unusually brief history of its own, prides itself on the fact, and mostly assumes that the way to surpass other nations in civilization is to develop more present energy through having shallower historic roots. Some absorptions such as this from circumambient folk attitudes are likely—even for anthropologists—unless one is awarely on his guard.

Probably most important, however, is the current high prestige of science, which has attained fetishistic proportions in contemporary civilization, with a corresponding depression of history. The callower our graduate students, the more concerned are they about getting their anthropology "scientific." White at least is free from this influence.

II

So far, I have maintained that much of what White calls evolutionism is history, his claim of it for evolutionism resting on so narrow a construal of history as to leave history nothing but an exoskeleton or perhaps scaffold. Assuming that the controversial territory is reawarded to history, the question arises:

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12 In his posthumous work, *A Scientific Theory of Culture* (1944) Malinowski's attitude is less vehement, following rather his position in the article "Anthropology" in *Encyclopaedia Britannica*, 13th ed. He allows that there is a "moderate anthropological diffusionism," though its merit is "geographical rather than in its historical contribution;" it brings out "the influence of physical habitat [!] as well as the possibilities [!] of cultural transmission" (p. 32). On the contrary, in extreme diffusionism, he again sees "extrinsic and irrelevant" characteristics of culture being given maximum value (p. 35). And history is still being seen in its narrowest and most technical sense. "History explains nothing unless . . . a happening has had full scientific determination, and . . . we can demonstrate this determination on the basis of well-documented data" (p. 117). In other words, history can only be white with documents and scientific determinateness or black in "non-charted realms of hypothesis, where speculation can roam freely" (p. 118); which is certainly an all-or-none attitude.

Does there remain a legitimate, evolutionistic homeland? And of what does it consist? Here the reply becomes less confident.

White's examples suggest that he regards the historic "process" as being operative when the phenomena are so specific that we cannot but label them unique; but he sees the evolutionistic process at work in phenomena that fall into classes, within which there are more or less recurrent repetitions. Thus, "firearms, porcelain, the potter's wheel, the calculus, painting, the rite of circumcision, the ritual of shaking hands, Buddhism" have a history; but "the development of the ax, the loom, the clan, money, writing, occupational groups, stratified classes, mathematics, monarchy, physics" provide examples of the temporal-formal or evolutionistic process.[13]

Now it is generally accepted that we cannot write a genuine history of monarchy, but that we can have either histories of monarchies, or a "sociology" of monarchy in general. The very idea of a history of a *class* of phenomena is certainly calculated to set on edge the teeth of any historian, even of a broad-minded institutional historian. One can write a history of chess, which is a specific game (though a much more variable and plastic one in its form and function than generally assumed); but one can hardly write a real history of human games. Yet the question remains: Is there a difference in principle between an inquiry into subjects like games or monarchy by the method of general science which White calls "functional," and his "evolutionistic" method? By his definition the former is concerned with form and function, the latter with form and function plus time. Does this addition of the time factor legitimately constitute a new and separate approach or manner of understanding, or does it perhaps contain a logical contradiction? The question is fair because a number of philosophers[14] have agreed in recognizing a theoretic-scientific method and a historical method; as have a long series of anthropologists and sociologists whom White enumerates.[15] Either, therefore, White's evolutionism will turn out to be a somewhat disguised or special form of one of the two generally recognized fundamental methods; or if it proves to be a genuinely distinct method, its recognition will be extraordinarily important.

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13 Pages 236, 237.

14 Windelband, Simmel, Rickert; among contemporary Americans, Mortimer Adler and Hugh Miller.

15 Pages 225-228: Boas, Kroeber, Lowie, Radin, Mead, Chapple and Coon, Radcliffe-Brown, Tax, Redfield, Gumplowicz, Park.

III

Before grappling with the alternative directly, I should however like to clear the ground by examining another of White's exemplifications.

He says that both Tylor and I in discussing writing begin evolutionistically with stages but end historically with a narrative of the alphabet. He points out that in a chapter called "Spread of the Alphabet" I begin with consideration of writing in general, writing as a means of communication, and mention "three stages logically distinguishable in the development of writing"—pictures (including ideograms), rebus or transitional, and wholly phonetic writing. Therewith I have presented a formula descriptive of "a temporal-formal process," "applicable to all systems of writing in all time and in all places." After "disposing of the evolution of systems of writing,"[16] he says I turn to history, reciting the time and place of the origin of the alphabet, the subsequent diffusion to other lands and peoples, "and so on."

As a matter of fact, the "and so on" is a basic ingredient of my story of the alphabet. My chapter title mentions "Spread" and there is a map on which centuries are entered. However, the main concern is not to trace the space-time wanderings of a fixedly invariable unit called the alphabet, but to trace the changes of this unit or system in form and function, its derivatives, losses, and increments, invention of vowels and re-syllabification, growths of systematization and of simplification, non-acceptances, prestige associations, stylistic modifications, petrifactions, and revolutionary changes. In short, the alphabet neatly illustrates somewhere in its history most of the processes operative in culture: it is a convenient microcosm of cultural process; with the added advantage that, being a single historic growth, its phenomena possess not only space-time continuity, but a continuity or coherence of form and of function or relation. And for purposes of exemplification, it then seemed to me, and still seems to me, that a coherent nexus of closely related phenomena possesses certain advantages over a scattering selection of disparate and unrelated phenomena, from the angle of illustrating change and dynamics. So much for the main historical portion of the chapter in question: White and I are agreed that it is such, and we differ only in that I think once more that, like all significant history, my account deals with far more than tracing the movements of a cultural atom through time.

And now about the introductory passage on stages, in which I appear to have turned evolutionist. First of all, the stages are mentioned as *logically*

16 Page 240.

distinguishable,[17] which is not the same as asserting that they normally or necessarily succeed each other. It is true that when I said "first stage" I probably did mean to refer to first in order of development as well as to the first named. But there is also mention of how this stage "fails to flow spontaneously out of the human mind." And there is explicit statement that of many nations which had more or less entered the stage of pictography only five or six at most, possibly only two, had proceeded on their own initiative to the transitional or part-phonetic stage; and that completely phonetic writing had been originated but once, namely, in the alphabet. Moreover, the possibility is at least considered of all full occurrences of the first or pictographic stage being "the result of a single diffusing development." And the parallelism of syllabification in the Hindu, Japanese, Cherokee, and Vei contributions to writing is expressly explained as determined by a psychological fact, the tendency to apperception of syllabic units in slow speech. It may well be that my thinking in the paragraphs in question contained some remnants of influences from Tylorian days. But in the main the argument seems to me to have been historically motivated, though the total pre-alphabetic data were and still are so incomplete that the story was largely reconstructive to the point of being implicitly somewhat speculative; and the speculations were at least limited by avowedly psychological findings.

Even the succession of three stages can be given such a construal. Not only do the historical facts show that the succession of styles has been pictograph-ideogram-rebus-phonogram in the known instances, but an argument could well be adduced that that order is psychologically irreversible in a free internal development uninfluenced by alien inventions. There is every reason to believe that a visible mark, sign, or figure would first evolve an association of a visible form, and might readily become construed or accepted socially as a symbol of a visible object or visible act. But there is no known or conceivable psychological mechanism by which such a figure would spontaneously evoke a consistent auditory association and directly become a symbol for a sound-cluster. Psychologically the chain *must* be: made visible figure or picture, symbolic pictogram (or ideogram), spoken word for the object or idea, transfer of reference to a similar-sounding word happening already to function as audible symbol of another object or idea, further transfer of reference to any similar sound-group irrespective of semantic meaning. Such a step-by-step transference is wholly conceivable psychologically, whereas the direct or immediate use of a visual figure as

17 The stages are discussed in *Anthropology* (New York, 1923), §§ 130-133 (pp. 263-268), and in § 105 (pp. 223-225); the historical part of the chapter, on the alphabet, covers §§ 134-149 (pp. 269-292).

symbol for a sound-cluster makes no psychological sense. It is in this way that we may legitimately speak of the developmental process implied in the three[18] stages as being irreversible: the one-wayness is on the psychological, not on the cultural level.

The distinguishing of logically or psychologically possible stages is perhaps related to what Milke has called a "typology of possible developments whose causal conditions remain largely unknown" and has attributed specially to Spier and Boas.[19] In an article cited by Milke, Spier repudiates historical reconstruction, including his own, in favor of study of process of change. Boas's work also is now recognized as mainly lacking specific historic content or result, that is to say, determinations which include larger contiguities of space and time. Boas was not interested in such, but in processes; and in the analytic search for processes, he took into consideration, in each case, only the unavoidable minimum of space-time context. But he did consistently try to outline the total range of possible processes, and of possible kinds of results of these processes. That is, he was interested in determining the variety and extent of the forces that can shape culture. In this interest he was either akin to Wundt or was influenced by him. At any rate, Wundt's *Völkerpsychologie* seems to have had precisely this objective.[20]

This discussion has become somewhat ramifying; but much anthropological work, both past and present, defies assignment to any simple categories of history and science or history and functionalism. These are ideal manners: the actual course of work is most often mixed, both as to method and as to level. The question still remains whether White's evolutionism may not really represent special cases of such mixed or impure methods.

IV

In White's tabulation,[21] he cites as examples of evolutionistic process the disintegration of radio-active substances and the growth of organic individuals.

18 Probably four or more could actually be distinguished.

19 W. Milke, *Ueber einige Kategorien der funktionellen Ethnologie* (Zeitschrift für Ethnologie, vol. 70, pp. 481-498, 1938), p. 492: "eine Typologie möglicher Entwickelungen . . . deren ursächliche Bedingungen weitgehend unbekannt bleiben."

20 I speak with a certain reserve, because Wundt's work is vast, full of concrete cultural detail, but diffuse. It seems to have left practically no influence, not even of negative reaction, on contemporary psychology, and none on anthropology, except perhaps in Goldenweiser and Haeberlin. Boas repeatedly took up Wundt in seminars, and urged his students to read him; but apparently without much effect.

21 Page 243. This table is a reworking, with minor additions and eliminations, of the table on p. 385 of White's *Science is* Sciencing (Philosophy of Science, vol. 5, pp. 369-389, 1938). This earlier article develops many of the views of the 1945 one.

Radium breaks down into lead and helium at a fixed rate. This change is temporal as well as formal; therefore its process is evolutionary.[22] This exemplification suggests that what White means by evolution is a fixed, necessary, inherent, and predetermined process. The other example just referred to, growth of organisms, implies the same, in spite of the brevity of such developmental duration.[23] Organisms may be checked or mutilated in growth, but their maturity is a predetermined end according to each species.

This quality of predetermination, of spontaneous metamorphosis, of a teleological course, seems to be what is specifically characteristic of White's evolutionistic process. Like radium and the caterpillar, so galaxies, molecules, life, and culture also have a set course to run. White does not say this; but those of his illustrations which are unequivocal suggest it as holding also for the less defined examples. And the stages of writing fit in: they too are evidently conceived as a necessary sequence. White's evolution thus seems to be an unfolding of immanences. If not, it is for him to tell what rather it is. This is said not in stricture but in an attempt to clarify his position.

In fact, there is no inherent reason why one should be afraid or ashamed of belief in immanence or what is perceived as such. What counts is understanding of the involvements. The irreversibility of the pictographic-phonetic succession in writing is an apparent immanence on the level of perceptual consideration of culture; whereas we have seen that it finds a simple causal explanation in terms of psychological association. Similarly, every growth from egg to mature organism is on the face of it a piece of predetermination and immanence; the question remains whether it is limited to remaining that or whether it resolves also into causal explanations of generalizing science (White's functionalism). Certainly neither the anatomical nor the physiological processes, which in his table he assignes to "science," cease being operative during organic growth; though whether all features of growth, including its apparent predetermination, can be accounted for by these physiological processes, or only by still more underlying ones, I am not biologist enough to affirm with certainty.[24]

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22 Page 234.

23 The other illustrations in the table are "evolution of universe, stars, galaxies, molecules, etc.," "of life, of species," and "of traits, institutions, philosophic systems, of culture as a whole."

24 The key to growth is obviously in heredity, and White does not place genetics in his classification of "processes."

V

This brings us to White's basic philosophy as developed in *Science is* Sciencing[25] and resummarized in his present article.[26] Events occur, he says, in a four-dimensional continuum of three space coördinates and of time. From this we select certain aspects according to our approach. The historian interprets events in terms of time, "disregarding their formal aspects." [The context allows of no other interpretation than that *formal* and *spatial* are equated here!] Scientists [in the ordinary strict sense of the term; viz., the students who use experiment, quantification, and prediction] "exclude the temporal factor and deal only with the formal-functional aspect of events." [This appears to be another slide-over of meaning from spatial to formal-functional. At any rate, the space factor disappears, and the structure and function suddenly appear.[27]] Finally, the evolutionist interprets phenomena "in terms of space-time." [Here space is again the equivalent of form and function; since elsewhere the evolutionistic "process" is characterized as "temporal-formal"[28] and as "a temporal sequence of forms, time and form being simultaneously and inseparably significant."[29]]

To most readers, this seemingly immediate derivation of form and function from space will presumably appeal as something in need of justification; or if the derivation is not immediate, the steps which lead to the equating need to be cited. Perhaps White is in position to do this, or possibly has already done so elsewhere. Apart from this one major point, however, his scheme is a logically possible one and deserves consideration because his case for evolutionism as a method of inquiry seems to rest wholly upon this scheme.

VI

Nevertheless, I wish to outline a different scheme of knowledge[30] derived from consideration of how the several sciences actually operate, and perhaps also more in accord with prevalent epistemology.

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25 Especially pp. 374-377.

26 Pages 243-244.

27 The paper *Sciencing*, p. 375, is a bit more explicit: the spatial relationships of events or objects constitute a *structure* when regarded as constant, a *function* when regarded as variable.

28 Page 243, table heading.

29 Page 233, bottom. Cf. *Sciencing:* "The temporal-spatial process is not . . . the *sum* of these factors [space organization and the organization of phenomena] but their product" (p. 377); and "evolution is temporal-alteration-of-forms" (p. 377).

30 That is, different at points beyond the just discussed non-meeting of the space and form rafters in the roof joint of White's scheme.

This view, basing on Rickert but going beyond him, holds that the method of history is to examine phenomena or events in their space and time contiguity.[31] This contiguity[32] may not be violated if the inquiry is to remain historical in its character. Hence the basic importance of context. Historical validation *per se* is achieved in terms of accord or fit with increasingly larger context. The attachment to contiguity in space and time, to continuity of the spatio-temporal relations of the phenomena, coupled with attachment to the phenomena themselves, is what gives the historical aspects of phenomena their semblance of immediate reality. It is also the factor which prevents the historical approach as such from ever attaining to "laws," to general theory, to exactness of measurable findings, and to genuine verifiability, as by experiment. It is also what gives historical findings their quality of uniqueness, their individuation, their physiognomic property. Also, the attachment to the forms and successions of the phenomena themselves, in their actual concatenation or contiguities, yields a recognition of patterns which is akin to stylistic formulation.

Science,[33] on the contrary, abandons most of what history holds on to: position in the space-time continuum, singularity of quality, physiognomy, style. It attains to quantitative instead of qualitative precision. By systematic analytic dissolution of the concretenesses of phenomena, it achieves generalization, repetitive constants, verification. The essence of the method is abstraction: the resolution of phenomena into meta-phenomenal formulations. The validation of the system of science is not achieved—at least not directly—through an increasing context, since intellectually science destroys phenomenal context (as it does phenomena) except for the minimum preserved as internally relevant to a special situation; the validation is in prediction or experimental correction and verification.

In principle these two approaches are applicable to any kind of phenomena. In actual inquiry, however, experience to date has been that scientific method wins its greatest successes on the inorganic levels[34] of phenomena, and decreas-

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31 This of course is a different matter from examining only the relations in time and space of the phenomena studied; which is what White in effect reduces history to. Indeed, he reduces it to less, because he does not allow it to deal even with space. By contrast, I hold spatial placement to be as necessary as temporal placement in historical approach; see below.

32 Contiguity must of course be understood as potential; not literally. A space or time gap in the record does nor preclude contiguity existing in the phenomena or events.

33 "Generalizing," "theoretical," "nomothetic," "exact" science.

34 Recognition of these levels seems to stem empirically from the development of knowledge; their number also is empirically determined by considerations of utility of subdivision. Psychic and social levels can be intercalated between the organic and cultural, when it is

ingly in the successively superposed ones. Pure historical method, on the contrary, was applied first, and still is applied with most result, to human events on the psycho-socio-cultural level. The more basic the level, the greater the dependence of the historic interest and approach on the corresponding scientific approach: as of astronomy on physics.

The use of space and time factors under this dichotomy requires further specification. Science of course does not shut out considerations of space and time. They enter into its most elementary findings[35] and into the problems on the most advanced firing line. But it is abstracted or relative time and space that are dealt with: such time and space only as are pertinent as measures to the problem of a given situation. Once a strictly scientific finding has been made, the results float completely free in the infinite continuum of total time and space.

A datum that floats as detachedly as this is not a datum of history on any level. Completed historical findings are placed in the continuum of total space and time, so far as possible, by reference to other points taken as fixed. This is one reason for the inescapable significance of context. But the primary concern of historical study, after all, is with qualities of phenomena as such. Of these qualities or properties of phenomena, their placement is part—but only a part; the physiognomy of events, or whatever we wish to call it, is after all the most significant; although the significance becomes complete only upon placement being included.

A consequence is that the time element is not the most distinctive factor in history, as is still so often, but superficially, assumed and asserted. Space determination is equally important with time determination in history. It happens to be more often given or assumed in the field of inquiry: geology of this planet, evolution of land animals, history of France, archaeology of Egypt. In such cases the time element tends often to be one of the unknowns which are sought; though the fundamental objective is always a qualitative configuration, a style or physiognomy, to which the spatio-temporal placement adheres as a property. Particular histories can suppress, or hold constant, either time or space: as, the history of one city; or, on the other hand, a descriptive cross-section or characterized moment in the history of an empire, or of human culture, a work of, say,

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convenient; a biochemical level between the physical (chemical) and the organic (physiologic). The organic level is generally most usefully taken as a unit; but a splitting of organic phenomena, into those seemingly unaccompanied and accompanied by psychic manifestations, corresponds closely to the subject matters of botany and zoölogy, respectively.

35 Lever, pulley, fall of bodies, etc.; equal areas of orbit in equal periods.

the order of Burckhardt's *Renaissance* or Tacitus' *Germania.*[36] In that case the product of inquiry is not a narration but an analytic-synthetic, characterizing description. To the same class belong ethnographic descriptions. To be sure, these are potential raw materials for a science of culture which is slated to be erected sometime. But they are also potential materials for a history of human culture which is to be written. Yet the prime significance of any inquiry is that which it has at the time, not that to which it may contribute later; and as what else can an ethnography be primarily designated, in its essential contemporary nature, than as an account of a particular cultural style, a timeless piece of history? I realize that this concept of synchronic historical treatment is so contrary to habitual thinking that it is likely to seem unintelligible.[37] On the contrary, I am convinced that the essence of the process of historical thought will continue to fail of being grasped as long as time is considered most important in that essence. This essence is the characterizing delineation of groups of phenomena in context, into which both time and space factors enter; but, with spatio-temporal place once established, either of these two considerations can be temporarily suppressed by being held constant by the historian, if circumstances or his objective warrant.

On reflection, why should concern with time be a main diagnostic criterion of the historical method in distinction from the abstracting procedure of scientific method? Time is not the complement of abstraction. Moreover, if it is time that distinguishes history, what is the branch of inquiry which is correspondingly dedicated to primary concern with space?—unless we are ready to accept White's answer that it is science. Or if there is none such, why not?

VII

If this dichotomous view is sound, there is no apparent room left for White's evolutionism as concerned with form-plus-sequence. The non-repetitive parts

36 Synchronic works like these are a well recognized and important type in the standard writing of history. Thus there may be cited Fustel de Coulanges, *La cité antique;* Maspero, *La Chine antique;* Tarn, *Hellenistic Civilization;* Mahaffy, *The Silver Age of the Greek World;* Hallam, *View of the State of Europe during the Middle Age;* Pirenne, *Les Villes du Moyen Age;* Runciman, *Byzantine Civilization;* Bryce, *The American Commonwealth;* Turner, *The Frontier in American History.* These are all famous and influential books by professional historians; and they are all mainly non-diachronic, mainly concerned with the analytic characterization of a stage or moment, not with the flow of events. Most of them do include a political narrative; but as an introduction, or as a chapter in a book. Thus, of Maspero's work, at least seventy-two percent is descriptive, not narrative. This is a proportion similiar to that which an anthropologist depicting the ethnography of a tribe would presumably accord to its "history" in the rather few cases in which he had sufficient documentary data to do so.

37 As it did to Boas in 1936 (American Anthropologist, vol. 38, pp. 137-141).

of what he so designates, like the evolution of our universe, organic life, and human culture, are merely large histories.[38] Other subjects in evolutionism, such as the growth of organic individuals or radio-active deterioration, are repetitive and therefore are parts of the findings of science, in situations in which sequence and duration happen to be unusually conspicuous. Certainly organic growth is intimately allied to heredity, if indeed it is not merely an aspect of it. But the normal functioning of heredity is in fixed recurrence, which is certainly far from any evolution.

I do not wish to press this view intransigently. White may yet redefine evolution in a more generally acceptable way; evidently a great deal of anthropological and other study is mixed in character; and certainly there are studies which are difficult to classify. Thus, like my own "formula" on the three stages of writing, Lowie's remarks on the occurrence of clans[39] look on the surface as if they recognized universal stages of culture and hence were a slip into evolutionism. They may be nothing more than summarized culture history; I am not certain; and it would be best for Lowie himself to characterize them. But there is much scholarly product whose precise nature still is hard to define; progress in clarification is slow; and it will no doubt be better speeded by coöperative attempts than by wrangling. If the evolutionistic method has something of its own which is more than a reduction of historical findings to the generalization of formula, the rest of us surely want to know about it. Perhaps White can come nearer to showing us on another try; or, better yet, by precise and full exemplification.

SUMMARY

White's recent distinction of the historical, evolutionary and "functional" (scientific) methods on all levels of phenomena, is inadequate in that it virtually limits historical study to tracing the movements of discrete culture items (treated as if essentially invariable) in the continuum of time. Position in space is equally important; and far from the phenomena being viewed atomically, the

38 See his fn. 41, p. 237, re the Einstein-Ilfeld *Evolution of Physics:* "not history of physics but *evolution,* for their purpose is not to tell a story of particular new and unique events, but to show how the philosophy of physics has grown and developed, how one form of physical theory has grown into another. The book could have been written without specific mention of a single man, a single date or place." This sounds like a genuinely historical but summarized interpretation of trends, with most of the specific evidential facts omitted. Could it be that White's evolutionism boils down to summarized history?

39 Cited by White, fn. 42: lacking (according to Lowie) in the earliest stage of society, arising on somewhat higher levels, tending to decay at certain levels, ultimately disappearing under centralized government.

aim of the historical approach is to see them in individuated configurations or nexuses which constitute unique patterns or styles. Some of what White calls evolutionism seems actually to be history; some of it, science; the nature of the remainder, or whether there is a remainder, is not clear. Possibly, the core of what he calls evolutionistic study is the recognition of predeterminations or immanences; or it may be only a sort of generalized history with the detail suppressed. White's statement as to the respective parts played by time, space, form, and function in the three approaches seems to contain an inconsistency, the equating of space with form; and this in any event needs clarification.

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SOME FEATURES IN THE SOCIAL ORGANIZATION OF THE TLOKWA (BECHUANALAND PROTECTORATE)

I. SCHAPERA

IN my *Handbook of Tswana Law and Custom*[1] I gave a short sketch of Tswana social organization, based mainly on observations made among the Kgatla and Ngwato tribes. Since that account was written, I have worked among seven other tribes of the same stock in the Bechuanaland Protectorate, South Africa. It now appears, as might be expected, that although all the Tswana have fundamentally the same social structure, individual tribes tend to vary from the rest in certain features. A good example is provided by the Tlôkwa of the Gaberones District. They are the smallest tribe in the Territory, their population being less than 2,000;[2] and, possibly for this reason, they lack several forms of grouping that are common elsewhere. But they sometimes also have distinctive variations in those forms of grouping that they share with other tribes, and it is unlikely that such variations can be attributed wholly or even mainly to the difference in size. An account of some features in their social organization will therefore serve a useful purpose in directing attention to the kind of problem that needs to be dealt with in comparative study. A further, and indeed the main, reason for my choosing the Tlôkwa is that, because of their smallness, I was able to ascertain in great detail the composition of the main social units, and can therefore illustrate comprehensively facts of which only limited examples can be given for other tribes.[3]

The Tlôkwa are recognized as a separate tribe, both by the Tswana generally and by the Administration of the Protectorate. They have their own tribal area or Reserve, and manage their own affairs under the leadership and authority of an hereditary chief who is subordinate only to the Administration. Originally they lived in what is now known as the Western Transvaal (Union of South Africa). After many vicissitudes and wanderings, due mainly to inter-tribal

1 Oxford, 1938.

2 Except for the Malete (pop. approx. 8,500), all the other tribes range in size from 16,000 to 110,000 people.

3 My fieldwork among the Tlôkwa was done in two visits of a month each (February and August 1943). I was engaged at the time in studying land tenure and migrant labor on behalf of the Administration, and the data gathered about social organization was intended to provide the necessary background and statistical material for those two aspects of tribal life.

wars and the colonization of the Transvaal by emigrant Boers from the Cape Colony, they took refuge (ca. 1853) with the Kwena of Bechuanaland. In 1874 the main body returned to the Transvaal, but a small group remained behind and still constitutes part of the Kwena tribe. Several years later, after the death of Chief Matlapeng (ca. 1835-1880), disputes over the inheritance of his estate led to a more extensive split. One son went with a following to the Kgatla, whose chief was his father-in-law; the descendants of this group are now part of the Kgatla tribe. Two other sons, each also accompanied by a small body of adherents, set themselves up as independent chieftains in neighboring parts of the Transvaal. Matlapeng's eldest son and successor, Gaborone, took the rest of the tribe back to Bechuanaland in 1887, and paid tribute to the Kwena for permission to live in their territory. The area he occupied was included in the tract surrendered by the Kwena to the British Government in 1895. It was subsequently granted to the British South Africa Company, to whom the Tlôkwa henceforth paid an annual rent for the right to remain on their land. In 1933 the area was again acquired by the Government, and formally proclaimed a Reserve for the tribe.[4]

ETHNIC COMPOSITION OF THE TRIBE

The historical outline just given shows that towards the end of last century the Tlôkwa tribe lost members by the secession of groups, some of which attached themselves to other tribes, and some of which became tribes on their own. Similar instances figure prominently in the history of all other Tswana tribes. They are indeed one of the main processes by which new tribes come into being or existing tribes enlarge their membership.[5]

The Tlôkwa themselves are a people of mixed origins, for, although they have lost many families of their own, they have also received immigrants from various other tribes. At the present time, the tribal population consists partly of Tlôkwa proper, i. e. people claiming descent from one or other of the many chiefs who have ruled during the past two hundred years and more. In addition, there are families whose ancestors belonged to such tribes as the Kgatla and Tlhako (Eastern Tswana), Hurutshe (Southern Tswana), and Ngwato

4 An historical sketch of the tribe, upon which I have drawn for some of the statements made above, has been published by V. E. Ellenberger, *History of the Batlokwa of Gaberones (Bechuanaland Protectorate)* (Bantu Studies, vol. 13, pp. 165-198, 1939).

5 The word "tribe" is used throughout this paper for the body of people organized into a political unit under the rule of an independent chief.

(Northern Tswana).[6] The Hurutshe joined the Tlôkwa very long ago, the time and circumstances being no longer remembered. The first Kgatla arrived about 1825, when their tribe had become temporarily scattered in a period of civil war; stray men have at various times since followed up their relatives, or, having married Tlôkwa women, have settled permanently among their wives' people. The Ngwato (themselves a mixed group) are remnants of the following that accompanied Chief Sekgoma I through the southern parts of Bechuanaland when he was driven from home by his son Kgama in 1872. The Tlhako, whose own tribe was a neighbor of the Tlôkwa in the Transvaal, joined Gaberone when he migrated to Bechuanaland in 1887; some were allied to the Tlôkwa by marriage, and others preferred to accompany them rather than remain under the rule of the Boers.

The diversity of peoples now represented in the tribe, and their relative proportions, are most readily seen by an analysis of totemic affiliation. The Tswana are divided into many groups, each having a different species of animal or, very rarely, some natural object as its seanô (object of reverence), serêtô (object of honor), seila (object of avoidance), or sebôkô (object of praise). The members of such a group may not kill, eat, or touch the skin of, their totem animal; should they inadvertently do so, they must perform a special purification ceremony to avert the misfortune which, it is believed, will otherwise befall them. However, these usages are not taken very seriously nowadays, especially by the younger people; sometimes they are in fact impossible to observe, the animals concerned having long ago been exterminated or driven from the country. Often there is also a myth relating how the totem was originally acquired. The most typical version is that an ancestor or leader of the group owed his life to the fortunate intervention of some animal of that particular species, which he then adopted as his totem. The name of a man's totem, again, is used as the most polite way of addressing him, i. e. instead of calling him by his personal name, one says thakadu (antbear) or whatever his totem may be. People who share the same totem are also expected to show one another friendliness and hospitality.

Apart from these usages, there are no organized forms of behavior common to members of the same totem-group, i. e. honoring the same totem. They may even marry one another, and often do; but when husband and wife differ in totem the children take that of the former. However, and this is especially relevant in the present context, totemic affiliation is often used by the Tswana

6 The Tlôkwa belong to what is commonly termed the Eastern branch of the Tswana; the Southern and Northern groups together make up the Western branch.

as a guide to tribal origins. Owing to the processes of tribal growth and dismemberment referred to above, many totem-groups are now represented in almost all the Tswana tribes. But since the royal families of the various tribes generally belong to different totem-groups, it has become the convention to say that people having the same totem as a certain chief originated in the tribe of which he is the ruler, no matter where such people are living now. Conversely, those members of a tribe who differ in totem from its chief are held to be of foreign extraction. The assumption is not always correct, since instances are known of people having changed their totem, usually for magical or political reasons. But such instances are comparatively rare, and in the main differences of totem are considered a sufficient indication of differences in tribe of origin.

The totem of the Tlôkwa chief is thakadu (antbear). Of the 364 families which I found in the tribe, there are altogether 195 (roughly 54 percent) whose menfolk have the same totem, i. e. who consider themselves and are acknowledged by others to be of the same stock as the chief. The various other totems occurring among the Tlôkwa, and the tribes where the people honoring them are said to have originated, are given in the following list, together with the number of family-heads representing each:

Totem		*Tribe*	*Families*
kgabo	ape	Kgatla	37
tlou	elephant	Tlhako	29
tshwene	baboon	Hurutshe	26
kwena	crocodile	*Kwena	25
nare	buffalo	*Malete	15
phuti	duiker	Ngwato	12
mmutla	hare	*Tswapong	8
tau	lion	Laka	8
phofu	eland	*Khurutshe	6
pelo	heart	*Talaote	3

Of the groups starred with an asterisk, the Talaote are ultimately an offshoot from the Shona of Southern Rhodesia, and the Tswapong claim to be allied to the Venda of the Northeastern Transvaal; the three others are of Tswana stock. But most of the families belonging to these five groups are descended from people who came to the Tlôkwa as refugees from the Ngwato tribe shortly after 1872. The Kwena and Malete groups, however, include a few more recent immigrants who came directly from those two tribes and never belonged to the Ngwato. The Laka are a Transvaal Ndebele tribe; the families now living

among the Tlôkwa are descended from a single immigrant who long ago settled there as a magician.

The proportion of alien families is on the whole smaller among the Tlôkwa than in most other Tswana tribes. One reason probably is that the Tlôkwa, unlike many others, were never a powerful tribe, able to enlarge their numbers by conquest or wholesale immigration. Indeed, as we have seen, they were themselves for some time subject to the Kwena, and it is only through a land settlement with which they had nothing to do that they subsequently regained their independence.

The Tlôkwa also differ from other Tswana tribes in that diversity of ethnic composition is not accompanied by any diversity of language or custom. The Ngwato, to cite an instance that is by no means extreme, include not only people of Tswana stock, but groups of Bushmen (Sarwa), Kgalagadi, Kalaka and other Shona, Rotse, Koba, Subia, and Herero. Each of these groups still has its own language and cultural peculiarities.[7] Among the Tlôkwa, the only groups whose language was not originally Tswana are the Talaote, Tswapong, and Laka. Between them they constitute a very small proportion of the tribe (19 families out of 364), and their members, having all grown up within it, now speak the same language as the rest. I was told also that neither they nor any other sections of the tribe have customary usages sufficiently distinct to warrant special mention.

Another feature in which the Tlôkwa differ from the bigger tribes is the lack of formal social classes. Among tribes such as the Ngwato, Tawana, Kwena, and Ngwaketse, the various elements of the population are grouped into four distinct classes, based largely on differences of origin. These classes are known respectively as dikgosana (nobles, lit. "chieftains"), people descended from the chiefs of the ruling line; batlhanka (commoners, lit. "servants"), or basimane ba kgosi ("the chief's boys"), foreigners long ago absorbed into the tribe and made the retainers of the chief; bafaladi (aliens, lit. "refugees"), members of communities more recently incorporated; and malata, hereditary serfs attached to the chief and other prominent men.[8] Each of these classes, with the occasional exception of the last, is represented in the tribal administration by a number of ward-heads, with local authority over their immediate dependents. Among the

7 Cf. I. Schapera, *The Political Organization of the Ngwato of Bechuanaland Protectorate* (in *African Political Systems*, eds. M. Fortes and E. E. Evans-Pritchard, pp. 56-82, London, 1940), pp. 57 f.

8 For a fuller description of the classes, cf. I. Schapera, *Handbook of Tswana Law and Custom* (Oxford, 1938), pp. 31 f., 73 ff.; *Native Land Tenure in the Bechuanaland Protectorate* (Lovedale, Cape Province, 1943), pp. 26 f.

Tlôkwa, on the other hand, all the ward-heads are members of the ruling line. In effect, therefore, the chief and his collateral relatives are the only important political authorities in the tribe. But in ordinary social life the descendants of earlier chiefs do not claim any special distinction, nor do even the chief and his brothers have any objection, such as is occasionally found elsewhere, to intermarrying freely with all other elements of the population. The latter are held to be of different origin, but they are not therefore regarded as socially inferior or called upon for special services not required from people of the royal totem-group. Even the names by which the four classes are distinguished in other tribes are apparently not used with the same meaning by the Tlôkwa.

TERRITORIAL AND WARD ORGANIZATION

In all other tribal areas in Bechuanaland, the people are distributed over their territory in a number of villages, one of which, the capital, is usually far larger than the rest. In the bigger tribes the outlying villages are also grouped into districts, each under the control of a resident governor appointed by the chief.[9] The Tlôkwa are unique in that the whole of the tribe lives in a single village. This may be due partly to the smallness of their Reserve (its area is only sixty-seven square miles), but it is probably also a survival of what seems to have been the old Tswana mode of settlement.

Judging from historical traditions and the writings of early travellers, it was fairly common about a century ago to find all the members of a Tswana tribe concentrated in one village round their chief. The subsequent multiplication of settlements came about partly through the conquest of territory in which other peoples were already living, and partly through the accession of large groups of refugees whom it was considered politic to place some distance away. Even at the present time the nuclear community of almost every tribe is still found mainly in the chief's town, the outlying settlements being inhabited largely if not exclusively by conquered or immigrant peoples. Thus, in the Kwena Reserve, there are large villages of Malete at Gabane, Hurutshe at Mankgodi and Mmanaana-Kgatla at Moshupa, all between twenty and thirty miles from the capital.

The Tlôkwa, when they returned to the country of the Kwena in 1887, were similarly located in a village of their own, where they have remained ever since. By the time that they regained their independence, after the land settlement of 1895, the imposition of British rule had put an end to intertribal warfare and

9 For a general account of Tswana territorial organization, cf. *Handbook of Tswana Law*, pp. 7-12, 94-101, and *Native Land Tenure*, pp. 23-26 and Chap. IV.

conquest. Owing moreover to the smallness of the area allotted to them, and their insecurity of tenure until 1933, they have not attracted any large groups of immigrants. The factors allowing other tribes to develop a wider territorial organization were therefore lacking, so that the Tlôkwa have retained the old system with hardly any modification.

Within the village (and tribe) the main social division is the ward (kgôrô, kgotla). This form of grouping, which occurs in all Tswana tribes, may be defined as a patrilineal but non-exogamous body of people bearing a common name, occupying their own hamlet, and forming a distinct social and administrative unit under the leadership and authority of a hereditary headman (kgosana, mong wa kgotla). It is characterized by a strong solidarity rooted in community of residence, constant association in daily life, and coöperation in economic, legal, and political activities; and loyalty to one's ward is a virtue highly stressed. I have already described elsewhere the general nature of the Tswana ward system,[10] and therefore do not consider it necessary to do more here than illustrate concretely statements previously made and indicate such special features as are found among the Tlôkwa.

The tribe consists altogether of five wards. Their names, present headmen, and the number of families in each, are as follows:

Ward	*Headman*	*Families*
Kgosing	Matlala Molefe Gaborone	113
Dipšwega	Sethunya Batleng Segokgo	91
Monneng	Mabotowe Bogatsu Mholo	60
Mafatswa	Thekiso Ramathudi Magetse	55
Thethe	Kereteletswe Moswaane Rapoo	45

The number of wards is smaller than in any other tribe, but this may be due to the fact that the Tlôwa are also the smallest of all the tribes.[11] A more important difference is found in the ethnic affiliations of the ward-heads. In every other tribe, some ward-heads are collateral relatives of the chief (who is usually himself also a ward-head), but there are many whose immediate or remote ancestors were of alien origin. This is due to the general rule that a body of immigrants, if large enough, will be recognized as a separate ward,

10 Cf. I. Schapera, *The Social Structure of the Tswana Ward* (Bantu Studies, vol. 9, pp. 203-224, 1935); *Handbook of Tswana Law*, pp. 19-28, 91-94; and *Native Land Tenure*, pp. 28 f., 72 ff., 97ff., *passim*.

11 There is a general, but not absolute, relation between the size of a tribe and the number of wards it contains.

with their leader as headman; communities of conquered peoples are usually also incorporated into the tribe as one or more wards, according to their own system of organization. Among the Tlôkwa, however, all the ward-heads belong to the ruling line. Matlala, head of Kgosing, is the chief of the tribe. The name of his ward, in fact, means "at the chief's place"; and in most other tribes there is also a Kgosing ward of which the reigning chief is the head.[12] Sethunya and Mabotowe are both collateral descendants of chief Bogatsu (ca. 1810); Thekiso and Kereteletswe are similarly descended from Bogatsu's grandfather Taukobong. These four headmen consequently all have the same totem as the chief.

The way in which the Tlôkwa wards originated reflects a process found also in other Tswana tribes. The general rule seems to have been that all a chief's sons, except his heir, would be grouped together to form a separate ward of their own, with the second son in the "great house"[13] as their head. They were sometimes also given retainers of common birth to look after their cattle and do other work. In this way at least one new ward came into being in each generation, or, if the chief had many sons, they might be grouped, according to their "houses," into two or more different wards. Each of these wards was named after either its first headman or the grazing-post where his cattle were kept. The heir remained in the royal ward (Kgosing), of which he became headman after the death of his father.

The Tlôkwa chiefs do not seem to have practised polygyny on a large scale, and some died fairly young or even before marrying at all. Moreover, as we have seen, a dispute about seventy years ago led to the secession of several princes, who when they left the tribe were accompanied by their immediate adherents. Similar splits had occurred in earlier phases of the tribe's history. Consequently, some of the wards created in the past no longer exist locally, but are found in other tribes. Nor, as I have already indicated, did the Tlôkwa ever receive groups of immigrants large enough to be recognized as separate wards.

The history of Monneng ward deserves special mention. Chief Bogatsu had three senior wives. Matlala, the present chief, is descended from the first, and Sethunya, the head of Dipšwega, from the second. The next wife, when married, was affiliated to the "house" of the first; hence the name Monneng,

12 The only exception known to me are the Ngwato, where the chief does not have a ward of his own.

13 Each of the main wives in a polygynous household has her own establishment or "house" (ntlo, lapa). By this is meant the social group comprising the woman herself, her children, and any other people directly attached to her, including affiliated wives.

"the place of the junior (wife)," by which her descendants became known. Subsequently she protested that she was being treated as a servant by her senior co-wife. Bogatsu thereupon gave her independent status, so that her sons became the nucleus of a new ward instead of remaining in Kgosing.

The five wards rank in the order in which they have been named. This is in accordance with the general Tswana principle that a royal ward takes its rank in the tribal hierarchy according to the chief from whom its headman is descended; the more recent the chief, the higher the status of the ward. The order of precedence is still retained in the initiation ceremonies for boys and girls, and was formerly observed in other forms of public ritual now discarded, such as the eating of the first-fruits, the establishment of a new village, and the "doctoring" of the army in time of war. In each case, the people of Kgosing first carried out or were subjected to the appropriate rite, then those of Dipšwega, and so on down to Thethe. At tribal meetings, too, if the wards are called upon to express their individual opinions, the headmen speak for them in order of seniority; and at feasts meat and beer are often distributed among the people according to their wards, starting with Kgosing.

The order of precedence has also affected the location of the wards in the village. As in most (but not all) other Tswana tribes, the village has three well-defined regional divisions.[14] In the center (fa gare) is the tribal council-place (kgotla), round which live the chief and other members of his ward. On either side of this central division are the two jointly termed dintlha (sing. ntlha), and more specifically ntlha ya godimo, "the upper (or right-hand) flank," and ntlha ya tlase, "the lower (or left-hand) flank." The former is in the east, and the latter in the west.[15] The "upper flank" is the more honored of the two, and in the traditional disposition of the Tlôkwa village it was always occupied by Dipšwega and Monneng, the "lower flank" being assigned to Mafatswa and Thethe. This arrangement was observed when the present village was founded in 1887. Since then, it has been disturbed by the growth of the population and the resulting congestion of the original ward hamlets, in consequence of which portions of wards have had to be moved. Today, part of Monneng is on the "lower flank," and Thethe and part of Dipšwega are in the "center." But my informants specifically stated that the present arrangement is fortuitous, and that should the village ever be moved again the traditional system of locating the wards would be followed once more.[16]

14 Cf. *Native Land Tenure*, pp. 69-71.

15 In some other tribes the compass bearings are just the reverse.

16 In my *Native Land Tenure* I stated (p. 71) that Kgosing was fa gare, Dipšwega ntlha

Because of this regional division, Dipšwega and the wards junior to it are sometimes referred to collectively as baɒintlha, "the flankers," as opposed to baʀgosing, "the people of the chief's place." This dual division, found also in other Eastern Tswana tribes,[17] is reflected mainly in political life. The central executive of the tribe consists primarily of the chief and his close paternal relatives, who all belong to Kgosing. The heads of the other wards have local authority only, although on occasion they are called in to advize the chief on matters of public concern. The division is seen also in the annual gatherings of the magwane (candidates for the next initiation ceremony). Every year the boys concerned come together outside the village and go in a body to the chief's council-place, thereby indicating that they wish to be initiated soon.[18] Before they begin their march, they line up according to their division, baʀgosing and baɒintlha, and the two groups fight each other with sticks until one yields by breaking rank. But on this occasion, and also when the men of the tribe are summoned to a large collective hunt, Monneng always goes with Kgosing instead of with the other baɒintlha. This is said to be a survival of the days when it was not yet an independent ward but (as we have seen) was attached to Kgosing.

SUBDIVISIONS OF THE WARD

Among all Tswana, the families belonging to a ward are in the first instance closely related to its headman through descent in the male line from the common ancestor who founded the group. But almost every ward now also contains people of alien origin. Some may have been placed there by the chief to help the headman and strengthen the ward when it was founded. Others may have been allowed to transfer from their own ward because of internal dispute. Or, if a group of newcomers to the tribe is considered too small to form a separate ward, the chief will attach it to one already existing. Although such recruits are usually not related to the nuclear lineage of the ward,[19] they may subse-

ya godimo, Monneng and Mafatswa ntlha ya tlase, and Thethe fa gare. This information, sent to me in 1941 by Mr V. Ellenberger, reflects (although not altogether correctly) the present position. On visiting the tribe for the first time 1943, I was given the statements made above in the text.

17 Among the Western Tswana (Ngwaketse, etc.) the flanking divisions are apparently not grouped together *vis-à-vis* Kgosing.

18 If the chief thinks they must still wait a few years, he sends them home; if he is willing to initiate them in the near future, he orders them to lie down, according to their wards, and they are whipped with the twigs that they have brought. This indicates, both to them and to the tribe generally, that preparations should be taken in hand for the ceremony.

19 Occasionally a man with some good reason for leaving his own ward will join that of his maternal uncle or parents-in-law, if either of these belongs to a different group.

quently marry into it. The ward is not exogamous, and marriages between members are in fact fairly common. However, should a wife be an outsider, she must be brought to live among her husband's people, and the children all belong to his ward.

The diversity of stocks within a ward is shown very clearly by an analysis of totemic affiliation, which, as we have seen, is a test often applied by the Tswana themselves to determine a man's origin. The following table lists the totems found in each ward and the number of family-heads representing them there:

Totem	*Wards*				
	Kgosing	*Dipšwega*	*Monneng*	*Mafatswa*	*Thethe*
antbear	56	29	45	45	20
ape	6	23	2	5	1
elephant	19	6	3	—	1
crocodile	15	8	2	—	—
baboon	3	—	—	—	23
buffalo	5	6	2	2	—
duiker	2	8	2	—	—
lion	7	1	—	—	—
hare	—	4	4	—	—
eland	—	6	—	—	—
heart	—	—	—	3	—

It is evident enough that none of the wards is of homogeneous origin. Even Mafatswa, although 83 percent of its family heads are Tlôkwa proper, includes people of three other stocks; and in Dipšwega only one-third of the family heads are Tlôkwa proper, the others being drawn from eight different stocks.

Within each ward, however, people of the same stock tend to cluster together. This is seen in the existence of the minor units that I shall term sub-wards. A sub-ward (kgotlana, diminutive of kgotla, "ward") occasionally consists of a single family-group, i. e. of several families whose men-folk are all descended in the male line from a common grandfather or great-grandfather; and where, as more often happens, it contains two or more family-groups, they are almost always closely related in some other way.

The sub-ward is a well-defined unit, with a distinctive name, and its members live together in a separate portion of the ward hamlet. It also constitutes a social and administrative division of the ward. Each has its "elder" (mogolwane), who is the senior living descendant of the nuclear group's common ancestor. (The ward-head himself is the head of his own sub-ward.) Assisted by the other men of his group, the elder arbitrates over internal disputes; he also represents and supports his dependants in all their formal dealings with outsiders or with higher authorities. His functions, in fact, are similar to those of the ward-head, although on a smaller scale; but he lacks full judicial powers, and he is not entitled of right to attend any meetings of headmen that are summoned by the chief. However, should his group become large enough, or any other good reason emerge, the chief may ultimately recognize it as a separate ward; in the bigger tribes, many wards have originated in this way.

The sub-ward is also the setting for the more important domestic events and activities of its component households. It deals as a unit with such purely domestic affairs as betrothal and marriage negotiations, the organization of feasts, the settlement of estates, the disposal of property, and the "inheritance" of widows—matters regarded as concerning not one household alone but the group as a whole. Its members also coöperate in such major tasks as building and thatching huts, clearing new fields, weeding, and reaping, and they help one another with gifts of food, cattle, and other commodities. They may even intermarry if they wish.

Subjoined is a complete list of the sub-wards among the Tlôkwa, with the names and totems of their elders. For Kgosing and Dipšwega wards I give also the number of families in each sub-ward; I did not get the same information for the others (p. 28).

As will be seen from their totems, ten of the twenty elders are members of the ruling stock. But the five who are not also ward-heads belong to such junior collateral lines that, except in one instance, even the name of the chief from whom they are supposed to be descended is uncertain. Nevertheless, they are accepted without question as true Tlôkwa. Magwadi and Tshikedi sub-wards are named after ancestors of their present elders (Magwadi was a son of chief Taukobong); the others bear the names of cattleposts.

Of the remaining sub-wards, Konyana and Mothapa (in Dipšwega), Kgakangwe (in Monneng), Ditsagalla (in Mafatswa), and Moshamu (in Thethe), all came together from the Ngwato. Matlapeng, who was then chief of the Tlôkwa, thought it safer not to keep them as a single group, but to

Sub-ward	*Elder*	*Totem*	*Families*
Kgosing:			
Kgosing	Matlala Gaborone	antbear	62
Letlhaka	Seame Maotoanong	antbear	21
Tlhako	Rakorwe Mokgadinyana	elephant	22
Mmotso	Simon Tatedi	lion	8
Dipšwega:			
Dipšwega	Sethunya Batleng	antbear	51
Rampedi	Mabotowe Nkwe	ape	6
Kgatla	Ramodisa Motlhabai	ape	17
Konyana	Motlokwe Modise	buffalo	10
Mothapa	Masara Sera	duiker	7
Monneng:			
Monneng	Mabotowe Bogatsu	antbear	
Magwadi	Ramomene Matsetse	antbear	
Kgakangwe	Ramasia Motsamai	hare	
Mafatswa:			
Mafatswa	Thekiso Ramathudi	antbear	
Mmampotlo	Mogolodi Ramatlapeng	antbear	
Maswaana	Selatlho Mosala	antbear	
Tshikedi	Thapedi Pheko	antbear	
Ditsagalla	Motsabeng Ditsagalla	heart	
Thethe:			
Thethe	Kereteletswe Moswaane	antbear	
Mashibitswana	Thokgwe Segokgo	baboon	
Moshamu	Modise Morapedi	elephant	

separate them into their respective families, which he placed under different Tlôkwa ward-heads for more effective control. Ditsagalla is named after its immediate ancestor who settled in the tribe; the others bear the names of the Ngwato wards to which they originally belonged. Tlhako and Kgatla sub-wards, again, bear the names of the tribes from which their founders came; Rampedi is also of Kgatla origin, and in that tribe there is still a ward of the same name.

Mmotso and Mashibitswana are respectively of Laka and Hurutshe origin; the names are said to be derived from the cattleposts of their founders.

Ellenberger, in 1939, listed two other sub-wards: Moshu, in Dipšwega, under Rama Seakgosing (totem ape), and Matlaila, in Mafatswa, under Mogatusi Ranyere (totem antbear).[20] On checking this in 1943, I was told that both groups were virtually extinct, owing largely to the migration of their men to labor centers or other Reserves; the few survivors had therefore been placed within Dipšwega and Mafatswa sub-wards respectively. Moshamu, in Thethe, is also becoming scattered, and will probably soon cease to exist as a separate group; in 1943 it was locally represented by only one family.

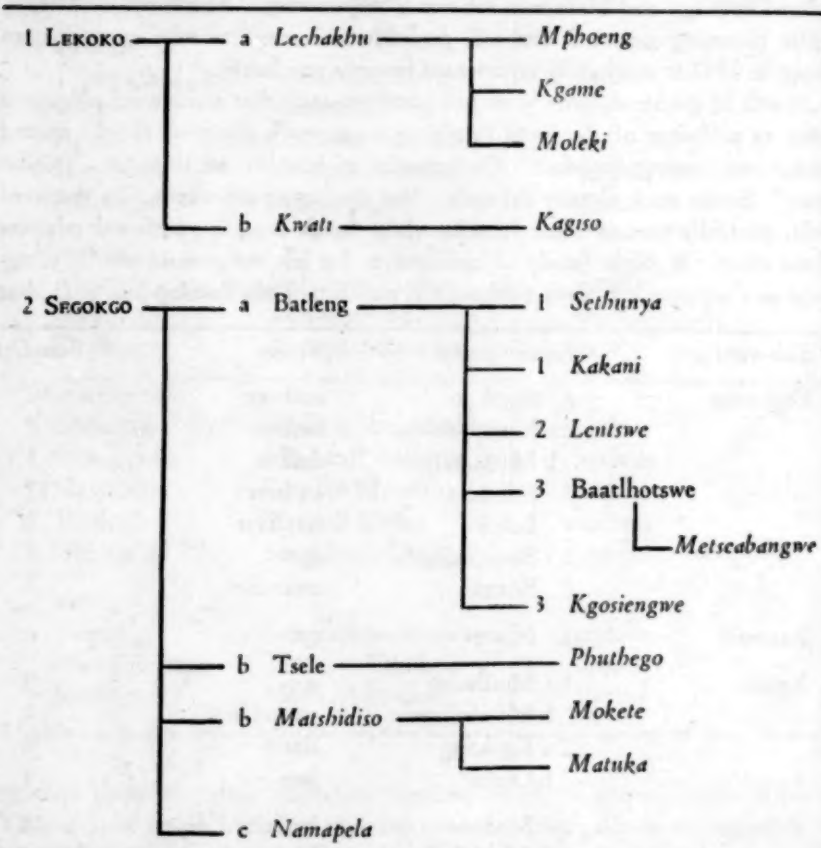
It will be gathered, from what has just been said, that a sub-ward originates either as a lineage of the royal family or as a small group of closely related immigrants coming together. Occasionally it remains an unmixed "family-group" (in the sense already defined). But the bigger sub-wards, like the ward itself, generally contain some families whose heads are not patrilineal relatives of the elder. A single family of immigrants, for instance, would not be recognized as a separate sub-ward (although it may ultimately develop into one), but

Sub-ward	*Family-group*	*Totem*	*Families*
Dipšwega	1 Segokgo	antbear	10
	2 a Mmapogo	antbear	7
	b Motsamai	duiker	1
	3 Seitshiro	antbear	12
	4 Lekoko	elephant	6
	5 Seakgosing	ape	8
	6 Semele	crocodile	7
Rampedi	1 Nkwe	ape	6
Kgatla	1 a Motlhabai	ape	9
	b Motshologane	crocodile	1
	2 a Kgokong	eland	6
	b Dintsi	lion	1
Konyana	1 Modise	buffalo	6
	2 Mokhibe	hare	4
Mothapa	1 Sera	duiker	7

20 Ellenberger, *History of the Batlôkwa*, p. 198.

would be attached to that of the ward-head under whose jurisdiction it is placed. A sub-ward may also be strengthened by men going there to live permanently among relatives-in-law or maternal relatives. As a result, many a sub-ward at the present time consists of not one but several family-groups, each bearing the name of the immediate ancestor from whom its menfolk are descended.

The actual composition of sub-wards is illustrated by the analysis of those belonging to Dipšwega given on the preceding page.



It will be seen that only two of the sub-wards (Rampedi and Mothapa) are each made up of a single family-group. The others are more complex. Segokgo, Mmapogo, and Seitshiro, family-groups in Dipšwega sub-ward are descended

from different sons (by the same mother) of chief Bogatsu. Lekoko is of Tlhako origin, but the immediate ancestor of the group was adopted by the head of Segokgo, who had married his mother's sister. Seakgosing was formerly a separate sub-ward named Moshu, but (as noted above) it is now included in Dipšwega because most of its men are either dead or away. Semele is descended from a single family that joined the tribe many years ago and was then placed in Dipšwega to work for the ward-head. The head of Motsamai is a recent addition, who attached himself to the sub-ward after marrying a woman of Mmapogo. In Kgatla sub-ward, the Kgokong families are related to Motlhabai through their paternal grandmother; Motshologane married into the same group fairly recently and made his home with them; and Dintsi is the brother of a woman married by one of the Kgokong family-group, to whom he attached himself after the death of his parents. The ancestors of Modise and Mokhibe, in Konyana, came from the Ngwato with the other followers of Sekgoma and were placed together in Dipšwega ward; because of their common tribal origin, they are regarded as a single sub-ward.

The nature of the relationship between the heads of families constituting a family-group is illustrated in the genealogies on page 30. The names of the family-heads now living are italicized. (Numbers indicate ranking of wives.)

MARRIAGE REGULATIONS

As shown above, both the ward and often also the sub-ward now contain families that differ in origin. This does not mean that no genealogical relationship at all exists between such families. On the contrary, as we have seen, some men have come into the group as relatives-in-law or uterine nephews; and even those who at first had no kinship ties with the other members may subsequently have become related to them by marriage. The Tlôkwa, like all other

Husband's ward	*Wife's ward*					
	Kgosing	*Dipšwega*	*Monneng*	*Mafatswa*	*Thethe*	*Foreign* *
Kgosing	*33*	20	17	10	13	7
Dipšwega	20	*26*	15	7	8	2
Monneng	15	7	*11*	1	3	2
Mafatswa	19	3	4	*11*	2	1
Thethe	12	5	5	4	*5*	2

* Belonging to some other tribe.

Tswana, have no exogamous divisions, and marriage between people belonging to the same group is fairly common. Thus, in 290 marriages about which I obtained the relevant information, there were 134 (46 percent) in which husband and wife had the same totem. The ward affiliation of the spouses is given in the accompanying table (p. 31).

Of the 290 marriages, there were 86 (approx. 30 percent) in which husband and wife both belonged to the same ward. Since there are five wards (and also neighboring tribes) from which a man can choose a wife, the proportion of marriages between members of the same ward is higher than might normally be expected, and suggests that such marriages tend to be favored.

I lack the same complete information about marriages within the sub-ward, since, as already mentioned, the only wards whose sub-divisions I studied in detail were Kgosing and Dipšwega. However, of the 59 instances in which men of these two wards had married fellow-members, there were no less than 24 (41 percent) in which husband and wife were both of one sub-ward. If we assume that the same proportion holds good for the three other wards, we get a total of 35 marriages out of 290 (12 percent) between fellow-members of a sub-ward.

The figures just given suggest that there are relatively few marriage restrictions among the Tlôkwa. In fact, the only blood relatives whom a man is specifically forbidden to marry are those to whom he is related in the direct line of descent (grandmother, mother, daughter, grand-daughter, etc.), his sister, father's sister, mother's sister, and sister's daughter. Marriage with any other kind of blood relative is not only permitted but encouraged. This applies in the main to other Tswana tribes also.[21] The only relative about whom usage varies is the brother's daughter. The Rolong and Kgatla forbid marriage with the daughter of either a full brother or a half-brother; the Ngwaketse and Khurutse say that a man may marry his half-brother's daughter, but not his full brother's; and the other tribes (including the Tlôkwa) permit marriage with both categories.

Informants maintained that the most desirable form of marriage is with a cross-cousin. Motswala wa motho ke mogatsê, says the proverb: "A man's cross-cousin is his spouse." In principle, first preference should be given to the daughter of the "linked" maternal uncle (malome o molebanyeng), i. e. of the

21 By "other" tribes I mean here the Rolong, Ngwaketse, Kwena, Ngwato, Tawana, Khurutshe, Kgatla, and Malete. There are many others in the Union of South Africa, but they have not yet been adequately studied, so that I do not know how far my remarks would apply to them.

uncle specially paired from childhood with one's mother.[22] Failing such a daughter, the daughter of any other maternal uncle will do. Then come in order of precedence, the daughter of the "linked" paternal aunt, and, failing one, the daughter of any other paternal aunt. But marriage with either a father's brother's daughter or a mother's sister's daughter is also regarded with approval; the former indeed, is specially sanctioned by the proverb, Ngwana wa ga rrangwane nnyalê, kgomo di boêlê sakeng, "Child of my father's (younger) brother, marry me, so that the (bridewealth) cattle may return to our kraal."

In the old days it is said, so much importance was attached to cousin marriages that a boy's parents almost invariably first sought him a wife among the daughters of their own brothers and sisters. Priority was given to the daughters of a maternal uncle, and it was mostly with them that child betrothals occurred. A girl's cousin could generally obtain preference over any other suitor, and if no one at all seemed anxious to marry her, her maternal uncles were expected to find her a husband among their sons. Segôlê se tsholwa ke ba bo-sona, "A cripple is looked after by his own people," is the proverb quoted in this connection.

However, the marriages just described are encouraged, but not regarded as compulsory. The claims of relationship can be offset by the lack of other desirable qualities, and if either the girl or her parents fail to reach satisfactory standards of conduct and character, a wife will be sought somewhere else. Her own people, similarly, may refuse to hand her over to some cousin of whom they disapprove or with whose parents they have quarrelled. And, of course, it happens often enough that no suitable cousin is available. Failing a close relative, a wife is generally sought among the more remote relatives, especially those on the father's side, since they are the people with whom one is usually more closely associated. The majority of marriages, however, take place between people who are not actually related. But even here there is a measure of preferential selection, for it is considered desirable that a man should marry a woman

22 In almost every family of any size, the parents usually pair the children together: elder brother with younger brother, brother with sister, and elder sister with younger sister. Those of the same sex are paired together alternately (first and third, second and fourth, etc.); those of opposite sex go in relative order of birth (eldest brother with eldest sister, second brother with second sister, etc.). Moreover, a man's linked sister is also the linked paternal aunt of his children, just as he is the linked maternal uncle of hers, and linked brothers are the senior and junior paternal uncles respectively of each other's children. Among his immediate relatives, therefore, a man may have one of each class to whom he is specially attached, and with whom he is said "to work together for life." It is with them that he is most closely associated in kinship obligations, and it is they who on all formal occasions should carry out the rules traditionally assigned to relatives of their class.

of his own ward. The reason given is that his parents will be well acquainted with all the eligible girls, and the two families concerned will always be near enough to help each other. Marriage into a completely unknown family seldom occurred in the old days, but is becoming more common now that parental discipline is decaying and children are tending to make their own matches.

The description just given embodies the substance of statements made to me by Tlôkwa and other Tswana informants. However, there is often a difference between what is conventionally recommended or encouraged, and what is done in practice. We must therefore consider to what extent the Tlôkwa do actually practise kinship marriages, and what kinds of relatives they then usually marry. The material upon which the following figures are based consists of genealogies of the senior branch of the royal family (Kgosing ward), a collateral branch of the royal family (Dipšwega ward), and two other family-groups, Lekoko (Dipšwega ward) and Phatswe (Monneng ward), which are not of original Tlôkwa extraction. It may therefore be regarded as a reasonably good sample of the tribal population. I would add that the relationships mentioned below are true genealogical relationships, not "classificatory" ones.[23] I inquired into the ancestry of every person marrying into the family-group whose genealogy I was compiling, and have been able in consequence to determine exactly what relationship, if any, there was between husband and wife.

Altogether, the genealogies embrace 331 marriages. Of these, 137 (41.4 percent) were between relatives. The corresponding figure for eight other Tswana tribes combined is 931 marriages out of 2,406 (i. e. 38.7 percent).[24] For further discussion, we may classify these kinship marriages into three groups: (a) where husband and wife had a common grandparent or were more closely related, (b) where they were related through a common great-grandparent, and (c) where the relationship was more remote. The number of marriages in each group, and their proportion of the grand total was as follows:

	Tlôkwa		*Other tribes*	
	Number	*Percent*	*Number*	*Percent*
(a) Common grandparent	29	8.8	224	9.3
(b) Common great-grandparent	30	9.1	234	9.7
(c) More remote	78	23.6	473	19.7

23 The terminology and other aspects of the Tswana kinship system generally are dealt with in a detailed comparative study which I hope to publish soon.

24 The tribes concerned have been listed above in footnote 21. The detailed figures for them all will be published in my comparative study of Tswana marriage regulations and kinship terminologies.

On the whole, the Tlôkwa conform fairly closely to the general Tswana pattern; the differences between them and the average for the other tribes are too small to have special significance. It will be seen that, in general, less than one-tenth of all marriages are between cousins or other very close relatives, though such people are regarded as the most suitable mates for each other; and, despite the preference expressed for kinship marriages generally, about three-fifths of all marriages are between people not related by ties of consanguinity.

A closer analysis of the actual types of kinship marriage found shows a still more marked variation between stated preferences and what is done in practice. The following table gives, both for the Tlôkwa and for the other tribes combined, the number of marriages with each class of relative in group *a*—where husband and wife had a common grandparent or were more closely related—and the proportion of such marriages within that group as a whole.

Wife's relationship to husband	*Tlôkwa*		*Other Tribes*	
	Number	*Percent*	*Number*	*Percent*
Miscellaneous[25]	—	—	7	3.1
Brother's daughter	4	13.8	26	11.6
Mother's brother's daughter	9	31.0	69	30.8
Father's sister's daughter	5	17.2	29	12.9
Father's brother's daughter	5	17.2	80	35.7
Mother's sister's daughter	6	20.7	13	5.8

If we take the various types of cousin marriage, it will be seen that among the other tribes the actual order of frequency is: 1, father's brother's daughter; 2, mother's brother's daughter; 3, father's sister's daughter; and 4, mother's sister's daughter. The first two, moreover, are by far the more common, and the fourth is comparatively rare. Among the Tlôkwa, on the other hand, the order is as follows: 1, mother's brother's daughter; 2, mother's sister's daughter; and 3, father's brother's daughter and father's sister's daughter in equal proportions. We have here not only a different sequence from what is found elsewhere, but also a definite bias in favor of maternal cousins. On the whole, the Tlôkwa practise cross-cousin marriage to a greater extent than the other tribes,

25 This group includes four cases of marriage with a half-sister, one with a mother's sister, and two with a sister's daughter. Almost all of these occurred among the Ngwaketse. They are considered incestuous in the other tribes.

but in both instances, a father's sister's daughter is married less often than a parallel cousin. The most remarkable feature perhaps is that among the other tribes a father's brother's daughter is married far more often than a mother's sister's daughter; among the Tlôkwa the latter is the more favored, although there is not really much to choose.

The marriages in group *b* i. e. between relatives with a common great-grandparent, cover a larger variety of relationships. The following is a complete list of such marriages found in the Tlôkwa genealogies; I have arranged them firstly according to the wife's generation *vis-à-vis* her husband, and then according to her line of relationship.

Generation	*Paternal*		*Maternal*	
First ascending	Father's father's brother's daughter	2	Mother's mother's brother's daughter	3
	Father's mother's sister's daughter	1	Mother's father's brother's daughter	2
Contemporary	Father's father's brother's son's daughter	5	Mother's father's brother's son's daughter	1
	Father's father's sister's daughter's daughter	3	Mother's father's sister's daughter's daughter	1
	Father's father's brother's daughter's daughter	1	Mother's mother's sister's daughter's daughter	1
	Father's mother's brother's son's daughter	1		
	Father's mother's sister's son's daughter	1		
First descending	Father's brother's son's daughter	1	Mother's brother's son's daughter	3
	Father's sister's son's daughter	1		
	Father's sister's daughter's daughter	1		
Second descending	Brother's sister's daughter	2		

For comparative purposes, it will perhaps be sufficient if we consider only generation and line of relationship. The following table shows how the Tlôkwa compare in these respects with the other tribes generally. The figures combine groups *a* and *b*, i. e. they include all spouses related through a common great-grandparent or some more recent ancestor.

	Paternal		*Maternal*		*Total*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Tlôkwa:						
1st ascending	3	5.1	5	8.5	8	13.6
Contemporary	21	35.6	18	30.5	39	66.1
1st descending	7	11.9	3	5.1	10	17.0
2nd descending	2	3.4	—	—	2	3.4
Totals	33	56.0	26	44.1	59	100.1
Other Tribes:						
1st ascending	29	6.3	5	1.1	34	7.4
Contemporary	223	48.7	90	19.6	313	68.3
1st descending	94	20.5	15	3.3	109	23.8
2nd descending	2	0.4	—	—	2	0.4
Totals	348	75.9	110	24.0	458	99.9

The figures show that, among both the Tlôkwa and the other tribes generally, about one-third of all kinship marriages are between people of different generations. In other tribes the great majority of such marriages are with women of the first descending generation; the Tlôkwa have proportionately many more marriages with women of the first ascending and second descending generations. A more striking difference is that, whereas among other tribes about three-fourths of the marriages are with paternal relatives, among the Tlôkwa the proportion is much lower, i. e. they marry maternal relatives more frequently than is common elsewhere.

So far I have been dealing with marriages between people who are related by blood. There are also regulations of various types governing marriage between relatives by affinity. Such relatives may be grouped from this aspect into three categories. There are some whom a man is allowed to marry; there

are others with whom he may neither marry nor cohabit; and there are still others whom he may not marry, but with whom he is allowed or even expected to cohabit under the levirate.

A man is not allowed to marry or cohabit with his wife's mother, his step-sister, or his step-daughter. Nor may he marry his step-mother or his daughter-in-law, even if they are widows, although he may cohabit with the former under the levirate. But he may, independently of the sororate or levirate, marry his wife's sister and his brother's widow or divorced wife. He may also marry his step-mother's sister and his daughter-in-law's sister, i. e. it is possible for a man and his son to be married to sisters.

Like all other Tswana, the Tlôkwa have the rule that a widow, if young enough, should cohabit with one of her husband's male relatives in order to continue bearing children. Her new consort is not regarded as a husband; the children he begets by her are legally those of the dead man, and they call him, not "father," but by the relationship term appropriate to his former status in their circle of kin, e. g. rrangwane, junior paternal uncle.

The choice of a seed-raiser is governed partly by the nature of his relationship to the deceased husband; only certain relatives are eligible, others being debarred by the rules of incest. The man who above all is expected to cohabit with a widow is her husband's younger brother, preferably the next in order of seniority. Failing a younger brother, the seed-raiser can be a junior paternal uncle, the son of a paternal uncle, or some more remote relative of approximately the same standing, e. g. an agnatic second cousin. The eldest son of a polygynist is also allowed to raise seed to his father, but only by the junior widows, not by his own mother. This form of levirate is sanctioned by the proverb, Molala le mmaagwê ga a bolawe, o itsala monnawê, "The man who lies with his 'mother' is not killed, he is begetting his (own) younger brother."

In the two varieties just mentioned, the seed-raiser is junior in status to the husband. Sometimes, however, he may be the latter's elder brother. This form of levirate, although not prohibited by any of the Tswana, is regarded in some tribes with disapproval, because of the difficulties it raises about the status of children. The proverb says, Kgosi ga a tsalele, "A chief does not beget children for others." Hence, it is pointed out, if a man begets children by his younger brother's widow, they will tend to claim a status higher than that to which they are entitled. In law, they are the children of the younger brother, but, owing to the senior status of their progenitor, they will obviously prefer to regard him as their father. It is because of such possibilities of conflict that this form of levirate is disliked. There is apparently no objection, on grounds of incest, to

cohabitation between a man and his younger brother's widow. The Tlôkwa get over the legal difficulty by saying that if the elder brother cohabits with the widow at her late husband's home, the children belong to the latter; but if he takes her to his home and builds a separate hut for her, the children are his, because he has now constituted himself her husband and is not merely a seed-raiser. I have not met the same compromise in any other tribe.

Some tribes (e. g. Kwena and Kgatla) formerly also allowed a man to cohabit with his son's widow, i. e. with his own daughter-in-law. The Tlôkwa told me that they regard such unions as incestuous. They added, however, that instances were beginning to occur nowadays, not so much with a son's widow as with the wife of a living son who has been away at work for a long time. The ostensible motive is to ensure that the woman continues to bear children in her husband's family. The chief stated that no action would be taken against the offenders unless they were officially reported to him. I failed to ask if any cases had in fact been reported and what was then done.

The Tlôkwa, finally, also allow a man to cohabit with his maternal uncle's widow, should no member of her late husband's lineage be available. But in such cases the seed-raiser may not afterwards marry the woman's daughters, since, although legally his cross-cousins, they are actually his own issue. The social relationship, in other words, is here subordinated to the biological relationship. The same form of union is found in other Eastern Tswana tribes, such as the Kgatla and Malete, but it is considered incestuous by the Western Tswana.

In addition to the levirate, the Tlôkwa practise the sororate. Should a woman be barren or have daughters only, or should she die while still fairly young, her husband may claim one of her relatives to bear him a son or to look after his infant children. The substitute (seantlo) is generally the wife's younger sister, especially the one paired with her. Failing a younger sister, an unmarried elder sister may be provided instead. If no sister is available, some other close relative will do, who should be of the husband's own or a younger generation. Preference is given to the wife's sister's daughter or mother's sister's daughter, but her brother's daughter or father's brother's daughter is also considered suitable. A cross-cousin is apparently excluded, mainly because she is not held to belong to the immediate family circle.

However, although if need be some other relative may be substituted, the wife's sister is always considered by far the most suitable person to take her place. This is reflected in a custom that was formerly universal among the Tswana (including the Tlôkwa), although it has now been abandoned everywhere. If a dead wife had no unmarried sister, her parents might give the husband

a younger sister who was already married to someone else. This form of sororate was practised especially when the widower's first wife had been his cross-cousin. The original husband of the woman who was thus taken to become a seantlo could keep the children she had borne him, but he could not recover his bride-wealth nor claim any later children as his own.

It may be added that the sororate in general was never obligatory. Where the two families were previously connected by blood, or if they were on friendly terms, they might agree to substitute another woman for a dead or barren wife; but the wife's people were not bound to provide such a substitute, nor was the husband compelled to seek one. Greater importance was attached to the levirate, and although the custom is admittedly decaying, especially among Christian members of the tribe, public opinion still tends to condemn a man who fails to raise seed to his dead brother.

The extent to which the levirate is in fact practised cannot be determined from the genealogies that I compiled. Since the widow's children are in such cases held to belong to her late husband, the name of the real father (if someone else) would not necessarily be mentioned; nor, I must add, did I when compiling the genealogies think of inquiring into the point. I learned actually of only two instances. In the one, a son (the present chief of the tribe) had cohabited with his father's widow and begotten a child who was regarded as his younger brother. The other was where a widow had been "inherited" by the mother's sister's son of her late husband. This unusual variety was explained by the fact that the husband had been adopted as a child by his maternal aunt; the man who subsequently acted as seed-raiser on his behalf was therefore also his foster-brother.

The incidence of the sororate is much easier to determine, since the genealogies list all a man's wives. Of the 38 Tlôkwa men who had married more than once, only one had practised the sororate, by marrying the younger sister of his dead wife. In the other Tswana tribes, the corresponding number was 22 men out of 336 (i. e. 6.6 percent as contrasted with 2.6 among the Tlôkwa). It is evident that the sororate, although a recognized institution, is by no means common in practice.

The Tlôkwa have one other form of marriage prohibition. As among all other Tswana, the adult members of the tribe are grouped into age-regiments (mephato), a regiment consisting of all the men (or women) who go through the initiation ceremonies together.[26] Members of the same regiment are bound

26 The ceremonies are held at intervals of approximately five years. For a detailed account of the regimental system, cf. Schapera, *Handbook of Tswana Law*, Chapter 5.

together by various rules and obligations. One such obligation, among the Tlôkwa, is that they may not marry each other's daughters; nor, in fact, did I find a single instance in which the prohibition had been violated. The only other tribes with the same prohibition are the Ngwaketse (Southern Tswana) and Kgatla (Eastern Tswana). Everywhere else there is not the slightest objection to such a marriage.

Apart from the various rules of mating just discussed, marriage among the Tlôkwa is governed by two essential conditions: (a) mutual agreement between the two family-groups concerned, as reflected in the formalities of betrothal, and (b) the transfer of cattle to the bride's family by the family of the bridegroom. These cattle are known as bogadi. In other Tswana tribes, their number is determined by the bridegroom's people, who give as many as they like, usually from four to ten head. Among the Tlôkwa, however, the number was until very recently fixed by tribal law. During the years 1820-1840, a period of chaos prevailed among the Eastern Tswana tribes, owing to their subjugation and conquest by the Ndebele ("Matabele") and other powerful tribes. Most of the people were deprived of their cattle, and bogadi payments were impossible. Chief Matlapeng therefore modified the traditional rules by ordering that wealthy men should give one beast as bogadi, "and the poor should simply marry and pay afterwards." His reason is said to have been the fear that "the poor might not be able to marry easily and hence the tribe would not increase rapidly enough." The law was not altered until 1942, when the present chief proclaimed that the people could revert to the ancient and universal custom. I found in fact that of 91 married men in Kgosing ward, 21 had not yet given bogadi for their wives; 64 had given an ox or cow each, 3 had given two animals each, and 2 had given three each. The five men who had given more than one beast were all sons or grandsons of a chief.

COMPOSITION OF THE FAMILY

We have seen so far that the Tlôkwa tribe is divided into wards, which again are divided into sub-wards each consisting of one or more family-groups. The family-group, finally, is made up of several families. A family, consisting typically of a man, his wife or wives, and their unmarried children (own or adopted), is the smallest social unit in the tribe. It is often a separate household, occupying its own lapa (enclosure of huts). Most couples, however, start married life as members of a larger household. As in most other Tswana tribes, a woman often continues to live in the home of her parents for some time after marriage. A special hut is set aside for her and her husband, who goes to sleep there with

her at night, but should spend the greater part of the day among his own people. This form of cohabitation, known as go ralala, may last for several years if the husband is still a young man. Occasionally he may even remain permanently with his wife's people, especially if he has quarrelled with his parents; but such a practice is considered reprehensible, since a married man should remain with his own family-group. Normally, once the wife has given birth to a child, the husband is expected to find her a home in his own part of the village. He may build a separate lapa for her, or share that of his parents. In the latter event, he must move out in due course to make room for his younger brother. But a youngest son generally stays on permanently, for he will inherit the lapa after his parents' death.[27]

Of 91 married men in Kgosing ward about whom I got the necessary information, 54 were living in their own homes, 16 with their parents, and 21 with their parents-in-law. Of the last group, 17 were men who had married fairly recently, but 4 were older men who had taken up permanent matrilocal residence. The proportion of men with their own homes is smaller than in most tribes.[28] This is attributed largely to congestion of the village and the consequent difficulty of finding a site on which to build. A more probable explanation is that the younger men, owing to their frequent and often lengthy absences from the Reserve, either do not have time, or are unwilling, to go to the trouble of building a home of their own.

Polygyny is still a recognized institution, and is apparently practised more extensively than in other tribes. Of the 364 families among the Tlôkwa, there were 40 (approximately 11 percent) whose heads had contracted polygynous marriages.[29] Only 20 of these men were still alive in 1943; 17 others were sur-

Number of wives	*Husband alive*	*Husband dead*	*Total*
2	16	12	28
3	4	4	8
4	—	3	3
5	—	—	—
6	—	—	1

27 For the Tswana rules of marital residence, cf. *Native Land Tenure*, pp. 80 f.

28 Cf. *op. cit.*, Table 3 (p. 81).

29 Comparable figures for other tribes are: Ngwaketse, 2.4 percent (in a sample of 128 men); Kgatla, 3.6 percent (172 men). These figures must be regarded as provisional. I have not yet worked through all my data on polygyny for any tribe except the Tlôkwa.

vived by one or more of their widows; and in the remaining three cases the wives were also dead, the families consisting merely of unmarried children. The number of wives in each family was as indicated in the table on page 42.

As will be seen, the number of wives is seldom considerable. The man with six wives was the head of Magwadi sub-ward; those with four wives each were the father and grandfather of the present chief, and another senior member of the royal family-group. The chief himself has only two wives.

The monogamous families may be classified roughly into simple and compound: in the former, each of the spouses had married only once; in the latter, either husband or wife had married again after the death or divorce of a former spouse. The numerical distribution of the various types was as follows:

Simple family:	both spouses living	205
	husband dead	57
	wife dead	14
	both spouses dead	17
Compound family:	widower remarried	20
	widow remarried	6
	divorcé remarried	5

The only feature calling for special comment is the relatively large number of widows who have not married again. Including the surviving wives of dead polygynists, there are altogether 74 widows in the tribe who have remained single. The great majority are now elderly women, but at least fourteen, judging from the age-regiments to which they belong, are still capable of bearing children. Since I did not ask when their husbands had died, I do not know how long they had been widows; this applies also to the elderly women. However, one reason for their not marrying again probably is the rule that a widow should continue to live among her late husband's people and bear children to him under the levirate. A few widows have indeed remarried elsewhere, which shows that the rule is not strictly observed. Several others, apparently disliking conditions at home, or unable to find husbands now that so many men are away, have themselves gone to live in other parts of the Territory or in the Union, where they are free from the restrictions surrounding them if they remain in the village. But most of them, it is evident, do actually stay on among their husband's people without remarrying.

The family varies considerably in size. Some contain only one person, such

as a widow or widower whose children are all married, or a solitary orphan. A few, consisting mainly of the spouses and unmarried children in a polygynous household, may have from 10 to 14 members. The actual figures, for the tribe as a whole, are as follows:

Number of members	*Type of Family*			
	Simple	*Compound*	*Polygynous*	*Total*
1	24	—	—	24
2	37	3	4	44
3	46	3	2	51
4	57	5	2	64
5	47	3	1	51
6	38	7	1	46
7	23	5	5	33
8	11	4	9	24
9	6	1	5	12
10	2	—	1	3
11	—	—	6	6
12	2	—	2	4
13	—	—	1	1
14	—	—	1	1

However, at the time of my last visit (August 1943), there were only 159 families (43.7 percent) which had all their members at home. In 100 one or more children were away, in 95 others the husband alone was away, and in the remaining 10 the absentees included both the husband and one or more children. Except for 58 men (43 married and 15 unmarried) who were in North Africa and the Middle East with the African Pioneer Corps, almost all the people out of the Reserve were working in the Union and elsewhere. The reasons for this labor migration are mainly economic. Since coming into contact with Europeans, the people have acquired many new wants, which they are unable to satisfy completely from the sale of their local products. The only other source of income open to most of them is to work for wages among the white people. This is particularly marked in the Tlôkwa Reserve, which is so small that some men cannot even get land on which to raise the crops that form their staple food. Other motives for migration are the desire for adventure and change, and

dislike of tribal or parental control; but while these may be important in individual instances, economic necessity is by far the most common cause.

The proportion of families affected by labor migration is even higher than the numbers given above indicate, since the fact that the whole of a family was home at the time of my visit does not mean that none of its people have ever been away. Inquiries I made into the labor history of the 452 taxpayers in the tribe showed that all but 18 were either away at the time or had been in the past. This means that altogether about 96 percent of the men in the tribe have had some experience of working abroad.

The great majority of migrants go to work for relatively short periods at a time, occasionally lasting less than a year, and seldom exceeding two or three; and as they grow older they tend to settle down permanently at home. But it is evident that labor migration, whatever its economic benefits, has tended to weaken the social cohesion of the family. The prolonged separation between husband and wife that it sometimes entails has given women greater personal freedom and increased domestic responsibility, but they also indulge to a much greater extent than formerly in illicit love-affairs. Adult sons, similarly, have in many families become the main support of their parents through the wages they earn. They consequently feel entitled to claim more independence than they formerly enjoyed, and complaints about their insubordination are nowadays very common.[30]

In addition, some of the people going abroad tend to stay away permanently. There were 38 families in the Reserve (10.4 percent of the total) which had lost one or more children from this cause, and 3 others in which a husband had abandoned his wife and children. I was given the names of another 25 families (not included among those that I have counted as now belonging to the tribe) which had within the past fifteen years or so migrated as complete units, fourteen to other tribal areas in the Protectorate, and eleven to labor centers in the Union.

The features just noted are not confined to the Tlôkwa, since other Bechuanaland tribes have been similarly affected. But, with the possible exception of the Malete, no other tribe has suffered to the same extent. Proportionately more people are away simultaneously than from anywhere else in the Territory, and the number who have not returned is also proportionately greater. The "broken home," consequently, is more common than elsewhere, and it is no wonder that

30 A detailed analysis of the causes, effects, and other aspects of migration, for the whole of Bechuanaland, is given in my report on "Migrant Labour and Tribal Life," presented to the Administration in November 1944. It has not yet been published.

the chief has repeatedly urged the Administration to find some means of ensuring the return of people going abroad to work.

CONCLUSION

I have described above only certain features in the social organization of the Tlôkwa. For instance, I have not dealt with their kinship system, nor with the age-regiments, sex differentiation, economic specialization, and the new forms of grouping resulting from contact with Western civilization. The account that I have given is restricted mainly to the local organization of the people, which however is also used as a basis for their administrative system and various other aspects of social life.

The initial significance of the material presented lies, I think, in the information it contains about the social composition of the groups discussed. By investigating the number, origins, and inter-relationship, of the families making up the sub-ward, ward, and tribe, I have been able to show exactly how each of these groups is constituted. We therefore have a more adequate description of their membership than can be obtained from generalized statements of the kind still so common in ethnographical literature.

The analysis of their social composition shows that fundamentally the three types of grouping are built up in the same way. They differ in size and in functions, but the tribe is essentially an aggregate of wards, and the ward is an aggregate of sub-wards. In each case we have a nucleus of linear relatives, to which (except occasionally in the sub-ward) there have been added various families or family-groups of alien origin. Moreover, just as the group may gain members from outside, so may it lose members by secession. This two-way process, of fusion and fission, is one of the most marked features in the social structure of the Tswana. The people are not divided into closed groups, membership of which is determined solely by birth. Instead, their system allows persons to transfer from one tribe to another, or even from one group to another within the same tribe. In such a type of organization, the bond uniting members of a group is not so much a common kinship tie as allegiance to a common leader.

The description of Tlôkwa social organization also raises certain questions of theoretical importance. We have seen that the people lack several forms of grouping that are common elsewhere. Thus, in every other tribe in Bechuanaland there is a more complex system of local organization, due to the fact that the population is not confined to a single village but is distributed over a number of separate settlements. Again, in tribes such as the Ngwato, Tawana, Kgatla,

and Kwena, the wards are grouped into larger units for administrative purposes.[31] The question obviously arises, why do the Tlôkwa not have the same forms of grouping? I have suggested above that one reason may be the relative smallness of the tribe, which has prevented it from developing like the others. But this explanation poses yet another problem: why are the Tlôkwa smaller than other tribes? The answer, I think, must be found in their history. Again, to turn to another aspect, we have noted that broken families are more common among the Tlôkwa than elsewhere in Bechuanaland, and that the main cause is the greater incidence among them of labor migration. But we still have to show why the Tlôkwa have been more affected by this process. The only explanation seems to be that they suffer from a shortage of land not found in most other tribes, and this again is due primarily to historical factors.

However, the study of tribal history may help to explain some of the features in which the Tlôkwa differ from other Tswana, but it will not account for them all. Our survey of marriage regulations, for instance, has shown that the Tlôkwa have certain prohibitions that are common to the Tswana generally, and share others with only a few of the tribes. Again, the types of kinship marriage actually found among them show a different order of frequency from what is common elsewhere. To explain phenomena such as these we have to extend our field of inquiry beyond the immediate history of the tribe. We need a comparative study of all the Tswana tribes, in which the analysis of their present social structures must be combined with the investigation of their respective historical developments. A functional study of the kind made familiar by Malinowski is not sufficient. The wider problems do not emerge until we compare the Tlôkwa with their neighbors of the same stock. It is only then that we find both fundamental similarities and certain important differences, and these cannot be explained by an intensive study of the Tlôkwa alone. It is for this reason that I have not tried here to do more than describe the main features of their social organization. An attempt to show why they share some of these features with other Tswana tribes and why they differ in others will be made in the comparative study of Tswana social organization on which I am now working.

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31 Cf. *Handbook of Tswana Law*, pp. 24-28, 101-103.

ALEUT LINGUISTIC PERSPECTIVE

JAY ELLIS RANSOM

THE PURPOSE of this paper is to report on the history of the linguistic work which has been done on the Aleut language to the present time. Not all of it has reached publication: some exists in manuscript form in various places. This paper therefore attempts to assemble the known sources of information, to discuss each briefly, and indicate available publications already existing, as well as point out probable new publications not yet in press.

GEOGRAPHY OF THE ALEUT LANGUAGE

The distribution of the Fox Island Aleut[1] speakers is, according to Veniaminov,[2] limited to the natives of Unalaska Island, the extremity of the Alaskan peninsula, and the adjacent islands from the Strait of the Islands of the Four Mountains to the Shumagins—that is, between the 159th and 169th degrees of west longitude, roughly flanking the 53rd parallel of latitude north.

Jochelson,[3] in his brief treatise on Aleut—presumably the Fox Island dialect—deals with that language which is spoken on the Alaskan peninsula, the islands of Akutan, Unimak, Unalaska, Umnak, and the Pribilof group. Reverend Kochergin,[4] at Umnak, stated that the Fox Island language is spoken from Umnak on the west to Korowenski on the east, two hours steamer run east of Sand Point to include Unga and Squaw Harbor. West of Perryville, which is the nominal border between Aleut proper and Kodiak Eskimo, the language is spoken in the villages of Akutan, Sanak, Belkofski, Unalaska, Dutch Harbor, Mackushin, Kashega, and Nikolski (Umnak) in the Aleutian chain, and St

1 The Fox Island dialect is considered to be the most representative language of the several dialects, and therefore a separate tongue. The other regional variations are thereby categorized as dialects. The greatest number of native speakers is associated with the Fox Island tongue.

2 I. Veniaminov, *Zapiski ob Ostrovakh Unalashkinskago Otdiela* [Notes on the Islands of the Unalaska District: compiled by Ivan Veniaminov and published at the expense of the Russian-American Company] (3 vols., St Petersburg, 1840).

3 V. I. Jochelson, *History, Ethnology and Anthropology of the Aleut* (Publication, Carnegie Institution of Washington, no. 432, 1933).

4 Reverend Kochergin was a half-Aleut, half-Russian native born priest in the Russian Orthodox Church. He traveled from village to village, spending one or more years in each village, carrying on church activities, acting as scribe and translator for the inhabitants.

Paul and St George in the Pribilof Islands. According to this informant, the language spoken on St George Island contains many dialect variations, making it difficult for him to use.

Since Veniaminov's time, the Fox Island Aleut has spread as far westward as Atka, although the original Atkan dialect is still used by the old people. This is an interesting observation, because in Veniaminov's time (1828-1838) that language which he called the "Atkan patois" was spoken on Umnak Island. The true Fox Island dialect which he describes in his grammar[5] was then spoken only as far west as Unalaska Island. This means that in the course of one century, the Fox Island dialect has expanded westward approximately 500 miles, and added 200 speakers.

In his grammar Veniaminov enumerated the total number of speakers of both sexes and all ages at 1495.[6] Jochelson believed that in his time (1909) there were about 2000 individuals using the language. In 1941 there were found to be approximately 100 Aleuts living on Atka, 100 at Umnak, 300 on Unalaska Island, and roughly 200 on the islands to the east—a rough estimate of about 700 persons, some of whom use the English language exclusively.

Referring to the sub-languages within the Aleut category, Veniaminov says:

> In America the term Aleut is loosely applied to the inhabitants of Kodiak Island, the Fox Islands, and the Andreanov Islands. The language of Kodiak is, however, totally different from the others, and the people of the Andreanovs, although their speech is but a patois of the Unalaskan, are yet often unintelligible to the Fox Islanders, rather on account of the varying names given to objects than from any real disparity of accidence or construction. The word Aleutian, as used here, denotes the indigenous population of the Fox Islands, and its language, in contradistinction from those of Kodiak and the Andreanovs, I style "Fox Island Aleutian".

Veniaminov further says in his grammar introduction:

> While it is improbable that the Aleutian is a parent speech, there is no internal evidence to indicate the source whence this archaic tongue, so essentially dissimilar to those of the neighboring peoples, has sprung.

Jochelson, working independently, states:

> That the Aleut language is of Eskimo origin, or even one of the oldest Eskimo dialects, can be inferred from its phonetics, grammatical structure, and vocabulary.

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5 I. Veniaminov, *Opyt Grammatiki Aleutsko-Lisjevskago Jazyka* [Essay Toward a Grammar of the Fox Island Aleutian Language] (St Petersburg 1834).

6 This is probably an enumeration of his parishioners, made annually by the priest in every village.

It is interesting to note that both Veniaminov and Professor Jochelson arrived at the same conclusion, based on internal linguistic structures, that the Aleut is an "archaic" tongue. Neither investigator offers any formal substantiation.

HISTORIC PERSPECTIVE OF INVESTIGATION

Rask, in his manuscript dated 1820,[7] was the first philologist who attempted to prove a relationship between Aleut and Eskimo. He used west Greenlandic for his comparative sketch. Thalbitzer[8] says of Rask: "He was really the first to lead the discussion into scientific channels."

It is apparent from a perusal of Rask's material—as presented by Thalbitzer—that the Aleut available to Rask in Petrograd was the dialect of Atka. Rask's elementary material consisted chiefly of word lists secured from Aleuts who had been brought to Petrograd, he knowing no Aleut and his informants having only meager Russian. Nevertheless, he made some astute observations uniting Aleut to Greenlandic, which he classed in the Finno-Ugric group.

The first formal grammar of Aleut was published by Bishop Innokentii (Ivan Veniaminov)[9] in 1846 at St Petersburg. Veniaminov came to Unalaska from Kamchatka in 1828[10] and in the following ten years erected schools and churches through much of the Aleutian region. One of his first acts was to introduce the reading and writing of Russian to the native population. In addition, he adapted a modified phonetic alphabet for writing Aleut, into which language he translated, with native aid, much of the New Testament. Certain promising Aleuts he trained for Church work, and a number of them undertook the task of translating Russian religious books into Aleut. This is important to note. Most of this work being done by native Aleut speakers, it is probable that these works represent today the purest form of non-Russianized Aleut ever to come down to us.[11]

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7 In the Royal Library, Copenhagen.

8 William Thalbitzer, *The Aleutian Language Compared with Greenlandic, a Manuscript by Rasmus Rask Dating from 1820 now in the Royal Library at Copenhagen* (International Journal of American Linguistics, vol. 2, pp. 40-57, 1922).

9 Bishop Nicholas, *The Life and Work of Innocent, the Archbishop of Kamchatka, the Kuriles and the Aleutian Islands, and Later the Metropolitan of Moscow* [in English, "for distribution among the people by request of the Most Reverend Bishop Nicholas"] (San Francisco, 1897).

10 By this date there were many Aleuts who were bilingual, i. e. they were good speakers of both Aleut and Russian.

11 The material in my own grammatical sketch, based on modern texts, represents a rather hybrid language, primarily aboriginal Aleut, but interspersed with many Russian loan words and not a few from English. [On the influence of this introduced alphabet, reference may be made to Jay Ellis Ransom, *Writing as a Medium of Acculturation among the Aleut,* Southwestern Journal of Anthropology, vol. 1, pp. 333-344, 1945.—Editor.]

Veniaminov's grammar, though admirably sketched for its period of linguistic investigation, is characterized by its Indo-Europeanistic stamp. Veniaminov states in his introduction that he is describing only those features of Aleut not finding analogues in Russian. In all cases he offers only a minimum of syntactical examples—frequently none at all—to bear out his rules and statements.[12]

In addition to the grammar, he published a dictionary of about 3500 words with Russian definitions.[13]

Henry,[14] working entirely from Veniaminov's grammar, translated a considerable portion into French, and reached some interesting conclusions, among them, reasserting Rask's hypothetical genetic relationship between Aleut-Eskimo and Finno-Ugric. Henry's work is not to be trusted entirely. In several instances he mistranslated the original Russian, and portions of Veniaminov's tables which had originally been left uncompleted, he developed by analogy and intuition.

In 1884 Pfitzmaier published another partial translation[15] of Veniaminov in German, injecting some of his own deductions and intuitive reconstructions of the Aleut language. In all probability neither he nor Henry ever heard Aleut spoken, hence their dependence on Veniaminov's original contribution.

Jochelson,[16] working with the Jesup North Pacific Expedition in 1909,

12 In preparing my own grammatical notes, I consulted Veniaminov on every phase of his grammar, bearing in mind that in his time the concept of linguistics differed from that of today.

13 This dictionary, in photostat, was loaned to the Works Progress Administration translators at the University of Washington. The actual complete translation was done by Mr Stephen A. Eringis, a Lithuanian. The general outline of the finished work was as follows: (1) Division of the dictionary into (a) Aleut, (b) Russian, and (c) English, so that a complete check on the English translation could be made available directly from the Russian. (2) English-Aleut: this arrangement according to roots was made so that a translation from English into Aleut might be possible. (Mr Geoghegan supplied such a translation to the Library of Congress, and also to the Territorial Library, Juneau, Alaska, but a copy of this work has not been generally available.) (3) Idiomatic expressions: these were abstracted from Veniaminov's dictionary and arranged in alphabetical order according to roots, both Aleut and English. (4) Special sections devoted solely to postpositions, conjunctions, and exclamations, and similar categories of speech were set aside for quick reference.

14 V. Henry, *Esquisse d'une grammaire raisonnée de la langue aléoute d'apres la grammaire et le vocabulaire de Ivan Vêniaminov* (Paris, 1879).

15 A. Pfitzmaier, *Die Sprache der Aleuten und Fuchsinseln* (Sitzungberichte, Philosophisch-Historische Classe, Kaiserliche Akademie der Wissenschaften, vols. 105-106, Vienna, 1884). This gives an abstract of Veniaminov's *Opyt Grammatiki Aleutsko-Lisjevskago Jazyka.* Vol. 107 has an account of Greenland Eskimo and Kodiak Eskimo; vol. 109 treats of the Greenland verbal forms.

16 Waldemar Jochelson, *Archaeological Investigations in the Aleutian Islands* (Publication, Carnegie Institution of Washington, no. 367, 1925).

Some of the linguistic materials left at Dr Franz Boas' death were deposited in the New

secured numerous texts and grammatical material, none of which have been published except a brief inadequate extract of the grammar he planned to write. This published material adds nothing to the known material of Veniaminov.

PROBLEMS

In classifying Aleut with Eskimo, Powell used the compound term, "Aleut-Eskimo" to name the stock, assuming a genetic relationship based on superficial similarities. Thalbitzer[17] and Boas[18] both point out that this almost tacit relationship has never been proved by an analysis of comparative morphology.

It can be inferred from this asserted relationship that Aleut may represent, in changed form, something of a proto-Eskimo language. It may be possible that a reconstructed Ur-Eskimo might resemble Aleut in a way similar to the resemblance between the reconstructed form of primitive Indo-European and present day Latvian.

Kodiak Aleut, being more closely affiliated in culture with Bristol Bay Eskimo than with Aleut proper, may indicate that the diffusion of modern Eskimo culture through western Alaska has been relatively recent. The Aleuts preceding this cultural invasion must have reached the islands quite early to permit the rise of language differences so deep-rooted today.

Structurally Aleut shows great similarity to Eskimo, and both languages contain many morphologic identities. Thalbitzer[19] lists 203 suffixes, exclusive

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York Public Library, and the Aleutian materials were among them. Professor Roman Jacobsen, who has worked on Paleo-Asiatic languages, went through most of them some time ago, and published an analysis of the phonemic structure of Aleutian, which was sorely needed since Dr Jochelson's text records showed a great deal of variation and inconsistency when it came to phonetic writing and the symbols used.

The Library has voluminous text materials (127 long tales with interlinear and free translation). Based on these, there are two grammatical sketches, one produced by Dr Jochelson, one by Dr Ethel Aginsky, one of Dr Boas' students; the latter was her Master's thesis. Also a dictionary, produced by Dr Aginsky on the basis of the texts, at a time when it was assumed that Dr Jochelson's own dictionary was lost. That dictionary was located only recently. All this is in manuscript, except the Jochelson grammatical sketch, which is typed or mimeographed and of which two copies exist. The first, with Jochelson's corrections, is in the Library, the second, without these corrections, in the hands of Dr C. F. Voegelin. Neither of these sketches is fully satisfactory.

Avrahm Yarmolinsky, *Aleutian Manuscript Collection* (New York: New York Public Library, 1944) briefly describes Jochelson's text materials and supplies a bibliography of all works relating to the Aleut language.

17 William Thalbitzer, *Eskimo* (in Franz Boas, *Handbook of American Indian Languages*, Bulletin, Bureau of American Ethnology, no. 40, part 1, pp. 967-1069, 1911).

18 Franz Boas, *Classification of American Indian Languages* (in *Race, Language and Culture*, pp. 219-225, New York, 1940), p. 220.

19 Thalbitzer, *Eskimo*, p. 1059.

of terminations, in Eskimo. Veniaminov lists for the Aleut a total of only 69 suffixes which he divides into five classes according to their use. Present day texts[20] would seem to indicate many more suffixes in Aleut—possibly 150—and undoubtedly there are still others which escaped being recorded.

MODERN INVESTIGATIONS

Desultory study of the Fox Island Aleut was carried on for many years by Mr Richard H. Geoghegan of Fairbanks, Alaska. Mr Geoghegan's work[21] was done entirely through the medium of the Russian language, and included several manuscript translations of Veniaminov's material into English.[22] His astute personal observations on the printed Aleut material have contributed greatly as a check and control to all subsequent work. He himself, however, never worked with a native Aleut informant.[23]

The most recent research was that of the writer while residing in Nikolski village on Umnak Island in 1936-1937. The material on which my morphologic studies[24] is based was gathered from native Aleut informants. Reverend Kochergin from the Russian Orthodox Church in the village, elected himself to be my principal translator because he spoke his native Aleut fluently in several dialect variations, Russian with almost equal facility, and English in a rather simplified form. He dictated several texts and translated them, as well as a long narrative, hand-written by a non-English speaking Aleut.

Ardelion (Artie) Ermelov became my second informant. He furnished a lengthy diary in his own writing, only a portion of which was translated at Umnak. He was a fluent speaker and writer of both Aleut and English, and to a lesser degree of Russian. In 1940 I found Artie in the Marine Hospital in Seattle, convalescing from tuberculosis, where he worked with me for a year

20 Texts collected by Jochelson in 1909 and myself in 1936-1937 abundantly illustrate the process of suffixation.

21 Richard H. Geoghegan, deceased in 1943, translated Veniaminov's grammar and dictionary, sending manuscript copies to various institutions and interested persons. A translation of the dictionary was reported in process of publication by the United States Office of Indian Affairs in 1945, with final editing by Miss Frederika Martin, an associate of Mr Geoghegan. [Published since this paper went to press: Richard Henry Geoghegan (Fredericka I. Martin, ed.), *The Aleut Language*, United States Department of the Interior (Washington), 1944—Editor.]

22 Copies in the writer's possession and in the Territorial Library, Juneau, Alaska.

23 In correspondence with the writer he indicated that he made some attempt to work with native informants, but was prevented by pressure of court business, and such work as was done was never written up.

24 To be published, 1946, in International Journal of American Linguistics in the form of separate papers on phonology, morphology, and texts.

adding to the information originally collected from him and other informants at Nikolski three years previously.

Artie introduced the peculiar phenomena of obscenity and swearing as a topic for linguistic investigation. The use of obscenity and cursing is found only among the Fox Island speakers, of all the native peoples of the Aleutian Islands and the western coast of Alaska. At least Artie, who has traveled extensively in fishing operations along those regions, reported that no swearing was possible in the native languages and dialects beyond the Fox Island area. He stated that the Eskimos of Bristol Bay marveled at the Aleut ability to swear, and they themselves told Artie that their language did not permit such speech forms.

It is possible that the use of obscenity grew out of native contacts with the early Russians, many of the natives being bilingual, with Russian as their second language. With the advent of the American whalers in the region and the withdrawal of Russian influence after 1867, when America purchased Alaska, English slowly replaced the latter tongue. Many of the terms used in cursing seem to be literal translations from the picturesque language of white fishermen and whalers. A natural means of self-expression, peculiarly Aleut in its use of suffixation processes, modified the translations in significant ways. It is especially interesting to note that both duplication and reduplication were introduced into suffixes of an obscene connotation for added emphasis, these phenomena of linguistic process being entirely unknown to Aleut morphology.

The selection of terms used for opprobrium and for fighting insults was drawn principally from anatomical parts, especially of the female. It is, however, to be noted that the vocabulary of obscenity used by the males is not used by the females. Artie says that the women make use of less forceful or descriptive terms, and do not refer to the human anatomy.

CONCLUSION

The Aleut language, especially the Fox Island dialect, has interested linguists since early in the 19th century when the first Aleuts were being transported to Russia. Since the Aleutian Islands have always been a remote and isolated region, with difficult transportation problems between the various islands, there has been little opportunity to study either the culture or the language. Jochelson's work furnished the only really scientific material on Aleut culture and prehistory since Veniaminov's very early observations, but much of the former's material is still unavailable for study.

Veniaminov was the first linguist to reduce the language to a grammar. He

was probably the first European to learn Aleut and used it as his principal tool of communication throughout his ten years work in the Aleutian parish. His grammar was a small product of his wide field of scientific interest, wholly aside from his religious work.

Jochelson in 1909 collected texts and attempted to work out grammatical processes apparently unaware of the existence of Veniaminov's grammar, or even of the printed Aleut books so widely distributed through the Aleutian Islands. At least he makes no mention of this material in his brief sketch, and his interpretations of morphologic processes indicate a lack of grammatical insight into Aleut, which a perusal of Veniaminov's grammar would have rectified.

At the beginning of the 20th century Richard H. Geoghegan, a court reporter to Alaska and later British Consul in Seattle—and one of the really great Sinologues of the world, with a linguistic background and reputation known to nearly every linguist of the 19th century—interested himself in Aleut through his initial court contacts with the tongue at Belkofski and Valdez. Through the help of various literate Aleuts he secured considerable grammatical material to supplement his copy of Veniaminov's grammar which he studied thoroughly. The material gathered directly from informants was never published, although he read a paper on the possessory terminations of Aleut at the annual meeting of the Washington State Philological Association in Seattle, Washington, on January 4, 1909.

My own work, gathered almost entirely from living Aleut informants, has been greatly aided by all the previously published materials and the long studies of Mr Geoghegan. This material is by no means complete, as a morphology, but when published should serve as a working basis for future students of the Aleut-Eskimo stock language.

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SEX DIFFERENCES IN CEPHALIC INDEX DURING GROWTH

WILSON D. WALLIS AND RUTH SAWTELL WALLIS

DIFFERENCES in cephalic index observable between maturing males and females of a given human group have been generally believed to follow an invariable sex-determined course. During the process of growth three stages have been noted: (1) males under 7 years of age are more dolichocephalic than are females of the same age and group; (2) females from 8 to 16 years are the more dolichocephalic; (3) after puberty males resume and thereafter maintain a higher degree of long-headedness. Wissler (1930), Herskovits (1930), and Wallis (1931) described this fluctuating relationship and considered it a general human growth pattern. Wissler's impressive and brilliantly analyzed data from Hawaii consisted of six series of pure European, Chinese, Japanese, Korean, and Hawaiian stocks, and of four series of Hawaiian admixtures with the other groups. A series of American Negroes (Herskovits) and one of private school children from the United States (Wallis) seemed to confirm Wissler's thorough work.

The present study tests the universality assumed for these sex differences in headform in the age groups previously studied and extends the investigation to fetal life and to old age.

MATERIAL AND METHOD

Data used in the research include material from the literature and several unpublished series of head measurements.[1] All stages of development were considered from the early fetal to the adult; the bulk of the series covers the school

1 For use of unpublished material or original records, great gratitude is here expressed to the Department of Anatomy of the University of Minnesota and to Dr Richard E. Scammon and Dr Edith Boyd; to the Carnegie Institution of Washington, the Office of Indian Affairs, and Drs Sophia D. Aberle and Elizabeth H. Pitney; to the Department of Genetics, Carnegie Institution of Washington and Dr Morris Steggerda; to the Child Welfare Research Station, State University of Iowa and Mary Esther Toof; to Dr Leon J. Tiber of Los Angeles; and to Dr Clark Wissler, Curator Emeritus of the American Museum of Natural History. Dr Scammon also directed us to valuable sources not easily available.

For assistance in the measurement of Chippewa children thanks are herewith offered to Jessie C. Davis and G. Hubert Smith. Much of the computation was performed by students of Hamline University and the University of Minnesota assigned to the project by the National Youth Administration.

ages of six through eighteen years. Constants from 54 series appear on Table 17. Not all series are strictly comparable in size, age, and selection. The number of observations varies greatly. The mean age of two groups at, for example, "seven years," may differ by six months; in many cases investigators do not state the limits of the year intervals used. While the majority of the data represents mass measurement at a single period, a few series consist in part of measurments repeated on individual children for three to five consecutive years.[2] In view of these inequalities the uniformity of certain trends in the analysis is impressive.

All data used in this study are listed on pages 79-83, arranged according to the age of the subjects. Section A includes fetal, newborn, infants, and preschool children. Section B contains the 54 series from which the figures on Table 17 were computed; listing of these sources is by race and nationality group; the age range in the majority of cases is from 6 through 18 years. Section C lists additional courses in this age range not included on Table 17. Section D contains the adult series. Each section of the biblography is preceded by the numbers of tables in which the material appears. On page 83 are listed a few sources cited only in the text.

The statistical method employed is very simple. Constants representing sex difference were obtained from unsmoothed means of cephalic index in year intervals by subtracting each average female index from the respective average male index. A minus sign preceding the figure indicates on all tables a relatively broader head in the female.

Before the problem of sex differences is attacked, it is important to study other factors which influence the size of the index during the period of growth. These are the decrease of the index with increased age, common to both male and female, and the degree of age change characteristic of long and round heads. Sex differences in the diameters which compose the index must also be considered.

CRANIAL DIAMETERS

Unlike many bodily dimensions, the mean horizontal diameters of the female head do not exceed those of the male between infancy and puberty. From birth onward heads of boys are on the average both longer and wider than those of girls of the same group. Restating an early observation, Boas says:[3]

> The growth of the head offers a good example of . . . the peculiar [sex] relation of the measures which complete the principal part of their growth at an early time.

2 Table 17, series 1, 2, 3, and 41. In the New York series 50 percent of the individuals are repeated in two or more age groups; the percentage of repetitions in the Pueblo study is 95.

3 Franz Boas, *Growth* (in *Race, Language and Culture*, New York, 1940, pp. 103-130).

The total amount of increment from the second year on is slight . . . . The typical difference between the sexes is present from early childhood and the heads of girls are smaller than those of boys of the same age. The length of the head of the adult woman is about 96% of that of men. In childhood the length of the head of girls is about 97.4% of that of boys of the same age.

Calculations made from eleven series in the present study agreed closely with Boas' findings. Females at eight years had head lengths 97.5 percent those of males; at fourteen years the percentage was 98, and 95.7 at eighteen and over. Similarly, the breadth of the female head in the same eleven series bore the following ratio to that of the male: 97 percent at eight and at fourteen years; 96 percent for young adults. Thus, the component diameters of the cephalic index of male and female bear a nearly constant relationship throughout growth and maturity.

AGE

The tendency for the cephalic index to decrease with age has been pointed out by various writers, who in the main based their conclusions on the measure-

TABLE 1

Cephalic index in the fetal period
(D = male index minus female index)

Crown-heel length (cm)	*Minnesota* (Scammon)					*France* (Lafaille)				*Italy* (Corrado)				
	Male		*Female*			*Male*		*Female*		*Male*		*Female*		
	Number	*Mean*	*Number*	*Mean*	*Difference*	*Number*	*Mean*	*Number*	*Mean*	*Number*	*Mean*	*Number*	*Mean*	*Difference*
5.0– 9.9	8	76.9	13	75.8	1.1									
10.0–14.9	17	78.1	22	79.3	–1.2									
15.0–19.9	17	80.0	14	78.7	1.3									
20.0–24.9	19	79.0	29	77.6	1.4									
25.0–29.9	32	77.8	16	77.0	0.8					2	72.0	5	77.8	
30.0–34.9	18	77.8	14	75.4	2.4					8	77.6	6	79.7	
35.0–39.9	22	80.05	24	77.8	2.7					13	80.7	17	83.1	–2.4
40.0–44.9	17	81.2	8	78.5	2.7	2	76.5	3	81.0	25	82.0	17	80.4	1.6
45.0–49.9	13	79.9	10	79.7	0.2	11	78.7	14	78.6	29	81.3	23	83.6	–2.3
50.0–54.9	11	82.4	20	78.6	3.8	4	84.5	1	80.0	47	83.0	32	80.0	3.0
55.0–59.9										7	83.3			

ments of children from six to eighteen years. Does this trend appear early in life? How long does it continue?

Prenatal data in numbers sufficient to justify generalization are hard to find. The three sets represented on Table 1 have been analyzed by the writers from the individual records and seriated by crown-heel length, generally accepted as a sounder classification of fetal development than is estimated uterine age. An increase in cephalic index throughout the fetal period is clearly indicated in the three series. However, in a study made by Schultz, who grouped his material by lunar months, the index steadily decreases.[4]

TABLE 2

Sex difference in cephalic index of children from 3 months to 2 years

(Iowa: Meredith and Boynton)

Age (months)	*Male*		*Female*		*Difference*
	Number	*Mean*	*Number*	*Mean*	
3	72	82.7	42	82.4	0.3
6	103	83.9	90	82.8	1.2
9	126	82.5	101	82.4	0.1
12	102	82.6	95	81.2	1.4
15	85	82.2	75	81.6	0.6
18	82	81.5	63	80.4	1.1
21	79	81.2	63	79.9	1.3
24	84	80.7	63	80.1	0.6

Increase of cephalic index continues in early postnatal life to the age of six or nine months (Table 2).[5] Thereafter, it ceases to rise, and the decrease begins which, with individual, sex, or group exceptions, will continue throughout the years of growth.

From two to eighteen years an average decrease of 2.5 index units was found in the male series on which this study is based. The mean decrease and number of series are as follows: 2-6 years, 0.8 (6 series); 6-12 years, 0.9 (55 series); 12-18 years, 0.8 (30 series). There is wide variation among the series. For example, in the 55 groups the change between 6 and 12 years ranges from –2.9 to 0.9. However, the means agree closely with the results of studies based on repeated measurements on the same individuals over a period of years. Godin,

4 Adolph H. Schultz *Fetal Growth in Man* (American Journal of Physical Anthropology, vol. 6, pp. 389-399, 1923).

5 Data collected by Bayley, Boyd, and Tschepourkosky follow the same pattern.

who measured the heads of 100 adolescents of both sexes, at thirteen and again at eighteen years, found a drop of 0.6 units in the index.[6] Goldstein's[7] (1939) calculations from the Harvard series on measurements taken on 129 boys at six and repeated at seventeen years show a decrease of 2.1 units.

This general, though not invariable tendency toward diminution of cephalic index seems to continue beyond eighteen years of age. Unfortunately, data for these ages are as inadequate for generalization as are those for infancy. Fourteen series used in our study record the index to age nineteen; of these 64 percent show continued decrease of the index from 18 to 19 years. In 14 additional series the change from 18 years to a period designated "adult" was as follows: 8 decreased, 5 increased, one did not change.

Skull length seems, then, to continue growth longer, or at a faster rate, than does skull breadth, with a resultant reduction of cephalic index. In middle age, however, increase of muscle and tissue effecting head breadth and a cessation of bone growth in the antero-posterior plane tends to raise the index. Five male groups were available for study. In all of these the index increased during the decade from 30 to 40 years: Galton laboratory series of British, 0.3; Illinois convicts, 0.3; Japanese, 0.2, Japanese resident in Hawaii, 0.8, Hawaiian-born Japanese 0.6.[8] After forty years of age the groups are less uniform. The Englishmen measured by Galton and the American convicts continue to increase in index to age sixty: the two Japanese-born groups decrease between forty and fifty years. From fifty to sixty all series show increase; from sixty to eighty the convict group continues its constant rise; from seventy to eighty the English series decreases markedly; and the two Japanese series decrease at the latest ages studied, sixty and sixty-four years.

On the basis of our evidence, then, the trend of age changes in the cephalic index may be summarized: increase during fetal life and early postnatal months; decrease from the middle of the first year to young adulthood; increase in middle age; decrease in old age.

AGE CHANGE AND CRANIAL TYPE

"While the fall in index [with age] is universal," Wissler has said, "there are race differences in the rate of such fall . . . suggesting the possibility that the

6 Paul Godin, *Croissance du crâne et de la face pendant la période pubertaire* (Bulletin, Mémoire Société d'Anthropologie, Paris, vol. 3, ser. 7, 1922).

7 W. F. Dearborn, J. W. M. Rothney, and F. K. Shuttleworth, *Data on the Growth of Public School Children* (Monographs, Society for Research in Child Development, vol. 3, no. 1, National Research Council, Washington, 1938).

8 See Sources of Data below: Section B: 8b, Musselman; Section E, Gray, Shapiro.

difference lies in the growth of round and long heads."[9] In the present study round-headed groups show a sharper decline from six to eighteen years than do

TABLE 3

Type of cephalic index
and amount of change during growth

Index at 6 years Mean	*Index at 6 years* Range	*Change in index 6 to 18 years* Mean	*Number of series*	
		Males		
87.6	89.5–86.0	3.1	9	
84.4	85.5–83.0	1.7	9	
81.4	82.0–80.0	1.6	9	
79.2	79.5–79.0	1.1	8	
		Females		
87.0	87.5–86.5	1.8	5	
85.3	86.0–84.0	1.4	11	
81.4	83.0–80.5	1.0	9	
78.9	80.0–77.0	0.4	8	
		Males of 24 "race" groups		
86.7	85.5–89.0	3.7	5	Asiatics
86.7	83.0–87.5	1.8	7	Central Europeans
86.0	84.0–88.0	1.1	2	American Indians
80.3	79.0–84.0	1.0	10	North Europeans

the longer-headed series (Table 3). This decrease by groups holds true when the data are limited to repeated measurements on individuals of different cranial type. Again citing Goldstein's calculations from the Harvard material, we find the following change in index from six to seventeen years: 42 boys, index 81.5–x, decrease 2.9; 54 boys, index x–81.4, decrease 2.2.

In early years, then, differences between the more dolichoid and brachyoid groups are greatest; this suggests a longer period of maturation for the rounder-headed. A subdivision of 23 series of Europeans into 14 round (mean 85.1) and 9 long (mean 79.7) shows the gradual approach at higher age levels of the

9 See Sources of Data: Section B, 12, Wissler.

respective indices. The differences between males are: 6 years, 5.4; 12 years, 5.1; 18 years, 4.8. The corresponding differences between females are 6.0, 4.7, 4.7.

These types are not "racial," unless one makes the cephalic index the race criterion. Age changes in index arranged according to race and size of index (Table 3, lower half) show the greatest decrease in Asiatics, the least in North Europeans because the former are the roundest, the latter the longest-headed of the categories. The marked difference between the age decrease of Asiatics and of Central Europeans, each of whom have the same mean index (86.7), is not due to a racial factor. More than half of the seven Central European groups have means less than 85.5, which is the minimum for the five Asiatic.

SEX DIFFERENCES IN GROWTH PATTERN

Age change in the cephalic index is generally greater and more regular among the males than among the females of the same group. These characteristics appear in fetal life (Table 1). From 35.0 to 54.9 cm body length, the following changes take place in cephalic index: Minnesota males, 1.9, females, 0.8; Italian males, 2.3, females, −3.1. In one of these series, then, the increase is greater in the male; in the other series, the male index increases, the female decreases. In 32 groups of children, each of age 6 to 18 years, the index of all male series decreased with age; during the same period 28 percent of the female series increased and in the other 72 percent the average decrease was smaller than that of compared males. Again, Goldstein's figures for the Harvard study show for individuals the characteristic pattern. Between 6 and 17 years, the mean cephalic index of 129 boys decreased by 2.1 points, that of 176 girls by 1.2 points.

During growth round-headed females change in form more markedly than do longer-headed females, but the decrease is less than for males of the respective types (Table3). This sex difference is corroborated by the Harvard measurements of the same individuals at six and at eighteen years. While the longer-headed boys changed by 2.2 and the rounder-headed by 2.9 index points, the figures are 1.8 and 2.4 for girls in corresponding categories.

SEX DIFFERENCE FROM FETUS TO ADULT

Is there, as Wissler's data suggested, "a fundamental difference between the sexes in respect to cephalic index"? If so, is it manifest at all ages and stages of development? And what direction does it take?

Our scanty fetal data (Table 1) indicate a tendency toward longer-headedness in the female; this trend seems to continue among newborn and during the first year of life (Table 4). Relative dolichocephaly of girls is also apparent throughout the preschool years (Table 5). It seems, then, that in early childhood, con-

TABLE 4

Sex differences in cephalic index: Infants

Age (days)	*Newborn** *Individuals*	*Difference*	*Age* (months)	*First Year†* *Individuals*	*Difference*
1–2	46	–0.14	1	172	0.20
4	46	0.68	3	200	0.01
10	39	0.32	6	132	1.40
12	345	–0.30	9	126	0.10
?	350	0.17	12	142	1.20
			under 12	27	–1.50
			1 year	31	0.10

* Data from Boyd, Tiber, Cates, Lafaille, Lipiec.

† Data from Bayley, Boas (Frets), Boyd, Boynton, Meredith, Steggerda, Tschepourkovsky, Wallis.

TABLE 5

Sex difference in cephalic index during growth
(D = mean male index *minus* mean female index)

Age (years)	*Number of series*	*Difference with sign*	*Difference without sign*
2	7	0.54	1.46
3	10	0.55	1.41
4	20	–0.05	1.16
5	26	0.13	1.15
6	55	0.06	0.98
7	55	0.13	0.88
8	55	0.22	0.83
9	54	0.26	0.80
10	55	0.21	0.84
11	54	0.16	0.64
12	55	0.12	0.75
13	54	0.09	0.75
14	48	–0.02	0.66
15	44	–0.41	0.74
16	39	–0.29	0.82
17	35	–0.39	1.27
18	30	–0.53	1.08

trary to former statements, males on the average are not the longer-headed. However, any prediction should be tempered by a consideration of the high degree of individual and group variability, and the size of samples.

For the school years, from six through eighteen, earlier studies have shown the male head to be the rounder until puberty; between the ages of fourteen and sixteen, a shift was believed to occur in all groups, the females thereafter attaining and maintaining the more brachycephalic form. The present study, which employs a much larger body of material than had previously been assembled, seems on the whole to confirm the earlier conclusion (Table 5). At all year intervals except age four, the index of males is the larger until the age of fourteen; differences then become negative and so continue to the end of the range at eighteen years. Based on from 30 to 55 series the sex difference in index is 0.6 at six years and –0.53 at eighteen; comparable figures based on repeated measurements of the same individuals (Harvard study) are 0.1 at six years and –0.8 at seventeen.

Although these sex differences follow a regular course, they are very small; hence, before any conclusion is drawn concerning their fundamental quality, further analysis is indicated. Such a trend obviously could result from either of two conditions: from small, consistent sex differences in the same direction, or from large or small differences, both plus and minus, so evenly distributed that they nearly cancel. Actually the sex differences are not consistently small (Table 5, Difference without sign). More clearly than the mean difference, the percentage distribution of head types (Table 6) expresses the true condition. In the majority of series the index of the girls is not identical with that of the boys, but no law of sex or of growth determines the direction the difference will take. In no case do more than two-thirds of the series follow the "average" and the majority show about one-half the cases to be plus, the other half minus. At nearly every year interval in certain series male and female have identical means.

Moreover, this trend is also characteristic of the cephalic index of adults (Table 6). Wissler[10] says: "As to adult sex differences in cephalic index, there seems to be good evidence that more often than not the index for females exceeds that of males . . . it may be assumed that this difference . . . is a general human adult sex character." In the present study the number of adult groups in which the femal index is the larger is 57 of 108 series, or 53 percent, which is barely "more often than not." An increase in the number of series might raise or lower this percentage slightly, but would probably not reduce the variability of the mean.

10 See Sources of Data: Section B, 12, Wissler, p. 125.

TABLE 6

Percentage distribution of cephalic index

Age (years)	*Number of series*	*Male rounder* (percent)	*Male longer* (percent)	*No difference* (percent)
		Preschool		
2	6	100	0	0
3	8	75	12.5	12.5
4	19	42	53	5
5	18	28	55	17
		Early School		
6	51	55	41	4
8	51	54	42	4
10	49	59	41	0
12	51	63	33	4
		Adolescent and Post-adolescent		
13	52	52	44	4
14	44	39	52	9
16	32	41	56	3
18	30	30	67	3
		Adult		
	108	45	53	2

TABLE 7

Sex difference of cephalic index in longer and in rounder series

Age (years)	*Difference without Sign*	
	Rounder	*Longer*
6	0.84	0.58
7	1.20	0.36
8	0.77	0.41
9	0.76	0.43
10	0.98	0.46
11	0.76	0.45
12	0.75	0.47
13	0.70	0.72
14	0.67	0.64
15	0.46	0.24
16	1.55	0.57
17	0.84	0.72
18	1.17	0.63
Adults *	2.09	1.29

* Index x-75, 8 series; index 85-89, 12 series.

As Wissler has clearly demonstrated, "in comparison of the sexes the greater differences accompany the . . . rounder heads." To check this further, fourteen series, exclusive of material used by Wissler, have been divided into (1) longer and (2) rounder heads (Table 7). Each component group runs from six through eighteen years.[11] The results conform with those obtained by Wissler. Contrary, however, to Wissler's belief that these larger differences among the rounder-headed groups are merely a phase of growth and not characteristic of maturity, the same condition was found to exist between the most dolichocephalic and the most brachycephalic adult groups (Table 7).

A further breakdown of Table 5 shows that between the years six and twelve, of 40 series which run consecutively, 23 (56 percent) are made up of males predominantly rounder-headed at each age than are the females; 17 or 44 percent follow the opposite pattern. A distribution of these 40 series according to pattern and to size of male index at six years appears in Table 8.

TABLE 8

Percentage distribution of sex differences according to size of index

Index at 6 years	*Male rounder 6-12 years* (percent)	*Male longer 6-12 years* (percent)
x–80	13	30
81–84	48	35
85–x	39	35

The clearest conclusion to be drawn from this table is that of the most dolichocephalic groups (x–80), few follow a predominantly round male pattern. In adult life also the relatively longer male head is characteristic of the actually longer-headed groups (Table 9).

TABLE 9

Adult sex differences according to size of index

Male index	*Number of Series*	*Male minus female*
x–75	8	–1.25
76–79	28	–0.05
80–84	60	–0.64
85–89	12	1.77

11 Table 17: Long, Series nos. 1, 2, 4, 7, 13, 15, 32, 36; Round, Series nos. 11, 21, 30, 33, 39, 40.

Summary of sex differences during growth and at maturity:

1. During growth mean change in cephalic index is generally greater and more regular in males than in females.

2. The amount of index change associated with a given cranial type is greater in males than in females of the same group.

3. In fetal life, among newborn, and during the first year, there is an apparent tendency toward rounder heads in males than in comparable females.

4. From two to thirteen years mean indices of males are slightly higher than those of females. From fourteen through eighteen the mean male index at each year is lower than that of the female. More significant than the average trend is the high degree of variability which makes prediction impossible and invalidates the theory that this is the fundamental pattern of sex difference in head form.

5. Of adult groups a little more than half (53 percent) show a lower cephalic index in males than in females.

6. The greatest amount of sex difference in the index is found among the rounder-headed. This is true of adults as well as of children.

7. During growth and in adult life, the most dolichocephalic males are also the most dolichocephalic in relation to the females of their groups. A similar condition exists among the most brachycephalic adult groups, and is suggested also by the material for the growth period.

SEX DIFFERENCES WITH HEAD LENGTH CONSTANT

No predictable trend for sex differences in head form during growth or among adults has emerged from the foregoing analysis. In the more dolichocephalic groups there is a tendency for male heads at all ages to be relatively longer than those of the respective females.

However, when one measurement of head size—greatest length—is controlled, a clear and consistent trend in sex difference stands forth. The female head is narrower than is the male head of a given length. This holds true of all ages from newborn to old adult (Tables 10-15 and Figures 1-4), in both long and round headed groups of widely different ethnic origin (Tables 12-15). It might seem that the fine old concept of the female as the preserver of the round infantile type or as the relatively unevolved sex must be discarded. Fortunately at this moment Weidenreich has unintentionally come to the rescue of male superiority. "Brachycephalization," he says, "means a better adjustment of the skull to the conditions of the erect posture . . . it is an evolutionary process

TABLE 10

Sex differences in cephalic index with head length constant
Newborn

Head length (mm)	*Male index minus female index*			
	Boyd (46)	*Lafaille* (50)	*Tiber: 4 days* (46)	*Tiber: 10 days* (39)
106–107			1.7	
108–109			–1.5	0.1
110–111		1.6	2.9	1.6
112–113	–2.3	0.4	2.9	1.8
114–115	5.5		–1.4	–1.6
116–117	2.6		–0.1	3.5
118–119	0.6			0.1

TABLE 11

Sex difference in cephalic index with head length constant

Birth to 12 Months * (Boyd)		*Two to Eight Years* † (Boyd, Wallis)	
Head length (mm)	*Difference*	*Head length* (mm)	*Difference*
118–119	0.98	164–165	1.4
120–121	3.44	166–167	2.3
122–123	–0.35	168–169	1.6
124–125	2.33	170–171	1.0
126–127	5.52	172–173	0.8
128–129	1.42	174–175	0.5
130–131	7.93	176–177	1.4
132–133	0.81	178–179	2.5
134–135	–1.02	180–181	2.4
136–137	0.89	182–183	–0.2
138–139	–2.47	184–185	1.8
140–141	–2.30	186–187	–0.5
142–143	–2.78	188–189	1.0
144–145	0.45		
146–147	0.01		
148–149	1.64		
150–151	3.26		

* Number of observations: Boys 170, Girls 125.
† Number of observations: Boys 249, Girls 219.

which involves all mankind. . . . Recent man shows a tendency to become more and more brachycephalic."[12]

Seriation by units of cranial length emphasizes the increase in sex difference with rise in cephalic index (compare Tables 12 and 13).

That index of the females (Table 3) shows a less pronounced racial type than does the corresponding male index is further illustrated when head length is held constant (Table 16). From Tables 12 and 13 differences in index for

TABLE 12

Sex difference in cephalic index with head length constant

Head length (mm)	*Worcester: 5-18 years*				*Difference*	*Sicilian: 4-18 years*				*Difference*
	Male		*Female*			*Male*		*Female*		
	Number	*Mean*	*Number*	*Mean*		*Number*	*Mean*	*Number*	*Mean*	
166–7	10	84.3	25	83.4	0.8					
168–9	20	84.1	42	82.2	1.9	19	80.8	37	81.7	–0.7
170–1	38	83.2	91	82.0	1.2	29	82.4	47	81.6	0.8
172–3	47	82.6	104	81.2	1.4	38	81.6	61	81.6	0.0
174–5	98	81.5	127	80.7	0.8	37	81.1	70	80.6	0.6
176–7	103	80.8	177	80.1	0.7	33	80.5	71	79.6	0.9
178–9	136	80.6	155	79.5	1.2	37	80.3	82	79.3	1.0
180–1	189	80.0	181	78.9	1.1	44	78.9	75	78.9	0.0
182–3	184	79.2	142	78.5	0.8	58	79.0	75	78.4	0.6
184–5	194	78.7	128	78.2	0.5	46	78.5	57	77.8	0.6
186–7	170	78.6	95	77.6	1.0	36	77.5	41	78.1	–0.6
188–9	134	77.6	74	77.6	0.0	27	77.3	25	77.0	0.3
190–1	132	77.4	46	77.0	0.4					
192–3	88	77.0	37	76.9	0.1					
194–5	64	76.5	20	75.3	1.2					

each sex for each interval of head length were compared in all ten possible pairings of the five groups: from Worcester (Massachusetts), Sicilians resident in New York, native Hawaiians, Japanese resident in Hawaii, Pueblo Indians. The mean differences in index computed from these paired differences are, in every case except one, smaller for females than for males.

12 Franz Weidenreich, *The Brachycephalization of Recent Mankind* (Southwestern Journal of Anthropology, vol. 1, pp. 1-54, 1945).

TABLE 13

Sex difference in cephalic index with head length constant

Head length (mm)	*Japanese: 6-20 years*					*Hawaiian: 6-19 years*					*Pueblo: 6-12 years*				
	Male		*Female*		*Difference*	*Male*		*Female*		*Difference*	*Male*		*Female*		*Difference*
	No.	*Mean*	*No.*	*Mean*		*No.*	*Mean*	*No.*	*Mean*		*No.*	*Mean*	*No.*	*Mean*	
156–157	8	95.5	25	91.1	4.4						7	94.0	21	92.4	1.6
158–159	16	92.0	49	89.8	2.2						10	93.5	26	89.6	0.3
160–161	23	91.5	55	88.7	2.8						10	90.6	28	91.0	–0.4
162–163	37	90.7	65	87.0	3.7	7	91.8	15	89.0	2.9	23	90.7	48	88.7	2.0
164–165	58	89.3	86	87.0	2.2	8	89.0	14	88.0	1.0	22	88.7	35	88.5	0.2
166–167	83	89.0	94	85.4	3.6	16	87.4	20	86.2	1.2	30	89.4	64	87.5	1.9
168–169	113	87.4	99	85.0	2.4	22	87.0	22	85.6	1.4	50	87.5	46	85.4	2.1
170–171	101	86.6	103	84.4	2.2	14	86.1	25	84.1	2.0	29	84.8	22	84.2	0.6
172–173	118	85.6	77	83.8	1.8	24	85.6	27	83.0	2.6	46	84.8	37	84.0	0.8
174–175	100	84.8	93	82.8	2.0	23	85.1	31	84.1	1.0	42	83.9	22	82.6	1.3
176–177	110	85.0	47	82.0	3.0	39	84.2	32	82.8	1.4	41	82.7	17	82.3	0.4
178–179	120	83.3	50	81.6	1.7	25	83.2	16	82.6	0.6	34	80.5	16	81.2	–0.6
180–181	68	83.9	32	80.2	3.6	23	82.3	22	81.2	1.1	10	79.4	13	81.1	–1.7
182–183	71	81.7	19	80.2	1.6	11	80.6	12	79.5	1.1					
184–185	51	81.8	12	78.6	3.2	16	82.1	9	79.0	3.1					
186–187	39	81.6	9	79.4	3.2										

TABLE 14

Sex difference in cephalic index with head length constant
Germans: 20-100 years

Head length (mm)	*Male*		*Female*		*Difference*
	Number	*Mean*	*Number*	*Mean*	
166–170	11	89.3	97	86.6	2.7
171–175	90	86.6	274	84.9	1.7
176–180	250	86.0	448	83.1	2.9
181–185	486	84.4	390	81.7	2.7
186–190	483	82.6	198	80.4	2.2
191–195	378	81.5	58	79.7	1.8
196–200	143	80.4	7	77.7	2.7

TABLE 15

Sex differences in head breadth with head length constant
Adult Scottish Insane

Head length (mm)	*Number of males*	*Number of females*	*Difference in head breadth: male minus female* (mm)
178	11	96	0.48
179	9	127	−1.85
180	13	153	0.09
181	26	167	2.44
182	41	207	3.24
183	42	235	3.57
184	50	247	2.99
185	78	261	2.75
186	88	244	2.37
187	103	272	2.20
188	150	259	3.07
189	166	227	2.73
190	185	215	3.15
191	194	199	2.60
192	239	159	2.86
193	261	136	3.46
194	263	103	2.98
195	273	91	2.29
196	262	79	2.29
197	253	56	2.17
198	262	50	1.40
199	235	30	3.04
200	214	25	3.78
201	190	18	4.64
202	172	17	1.45

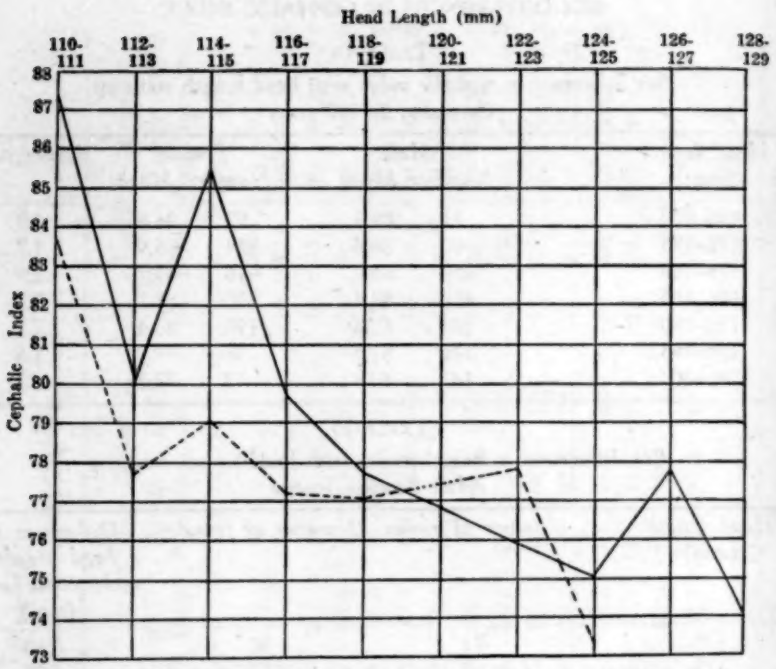

FIG. 1. Relation between head length and cephalic index: Newborn infants (Boyd). Male, solid line; female, dash line.

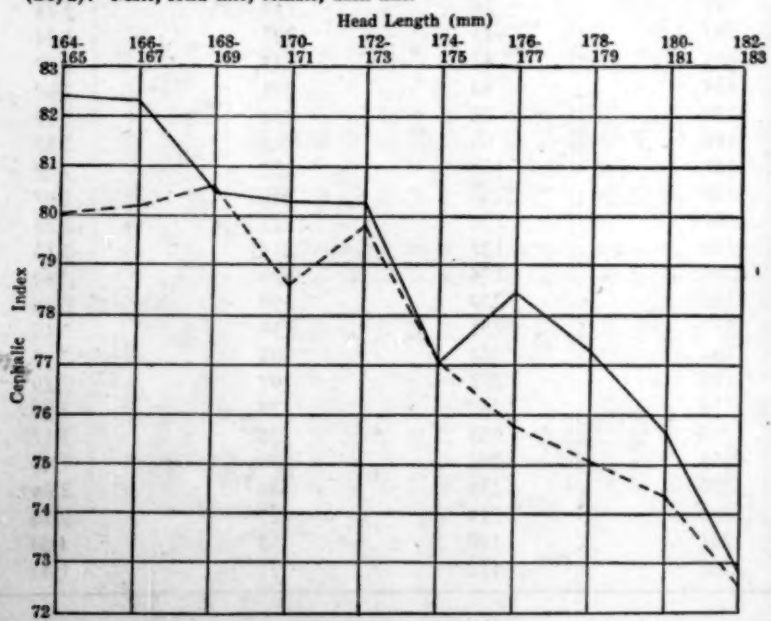

FIG. 2. Relation between head length and cephalic index: American children, 36-72 months (Boyd). Male, solid line; female, dash line.

FIG. 3. Relation between head length and cephalic index: American children, 5-18 years, Worcester, Massachusetts (Boas and Wissler). Male, solid line; female, dash line.

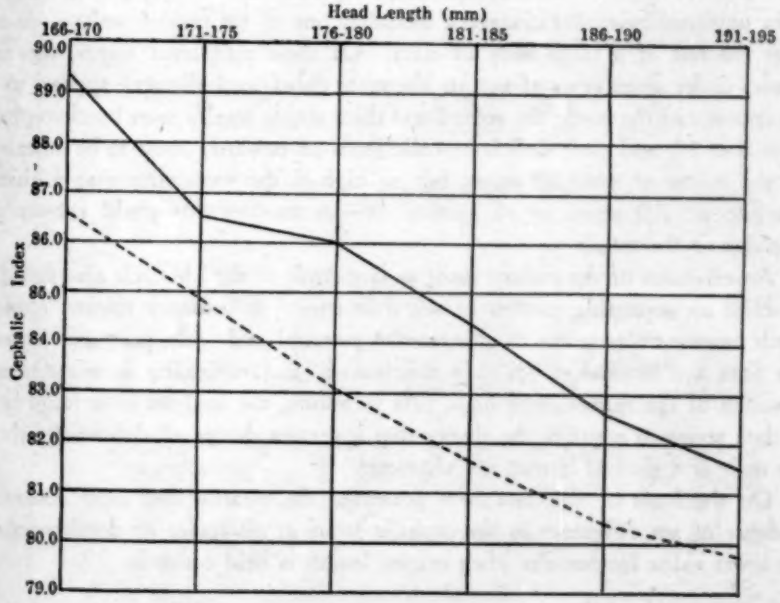

FIG. 4. Relation between head length and cephalic index: Adult Germans 20-100 years (Pfitzner). Male, solid line; female, dash line.

TABLE 16

Intergroup differences in cephalic index with head length constant

5 Groups: Worcester, Sicilian, Hawaiian Japanese, Pueblo Indians (See Tables 12-13)

Head length (mm)	Intergroup Differences		
	Male	*Female*	*Difference*
168–169	3.25	2.46	0.79
170–171	2.14	1.57	0.57
172–173	2.06	1.55	0.51
174–175	2.15	1.82	0.33
176–177	2.50	1.74	0.76
178–179	1.72	1.74	–0.02
180–181	2.46	1.36	1.10

CONCLUSION

The three stages of sex difference in the cephalic index during growth assumed to be universal by earlier observers, including one of the present writers, do not meet the test of a large body of data. Of these purported stages, the first (males under seven years of age are the more dolichocephalic sex) appears to be the opposite of the truth: the second and third stages (males more brachycephalic from 8 to 16, and more dolichocephalic from 16 onward) seem to be sustained by the means of some 50 series, but so high is the variability that a chance selection of 100 series or of another 50—or another 10—could reverse the direction of the trend.

An extension of the present study to both ends of the life cycle also failed to establish an invariable pattern of sex difference. A tendency toward rounder heads among males seems to characterize prenatal and early postnatal periods, but data are insufficient for safe conclusions, and variability in amount and direction of the difference is high. As to adults, the analysis of a large body of data seems to negative the theory that a greater degree of dolichocephaly in the male is a general human sex character.

On the basis of the data here presented the clearest and most consistent evidence of sex difference in the cephalic index at all stages of development is the lower value for females when cranial length is held constant.

TABLE 17

Sex differences: Section B (see Sources of Data)

Age (years)	1 *United States: Private Schools*	2 *Iowa*	3 *New York: Private Schools*	4 *Worcester, Massachusetts*	5 *Swedish: Massachusetts*	6 *New York: Orphans*	7 *English (Pearson)*	8 *English (Galton series)*	9 *Probstei, East Holstein*	10 *Kiel and Lübeck, Holstein*	11 *Dutch*	12 *North Europeans: Hawaii*	13 *Welsh*
2	0.89	1.84	1.50							−2.20	−0.90		
3	2.25	0.36	2.00							−1.90	−0.80		0.15
4	0.98	1.28	2.20				−4.71	−1.73		0.60	0.50		−0.67
5	0.17	0.46	1.30			−3.80	−2.63	−1.22		0.70	−1.20		−0.14
6	0.40	0.90	0.50	−0.80	1.40	−0.10	0.35	−0.59	−0.30	0.10	0.60	−0.14	−0.22
7	−0.01	0.75	−1.00	−0.30	−1.00	0.40	−0.44	−0.33	−0.10	2.20	−1.90	1.60	0.11
8	0.77	0.77	0	−0.30	1.20	−0.90	−0.23	0.13	0.90	0.50	−1.30	−1.49	−0.03
9	0.23	1.33	0	0	−1.50	−0.10	0.04	+0.38	−0.20	2.20	0.50	0.58	−0.18
10	−0.45	0.55		−0.30	−1.50	1.00	0.63	0.37	1.40	1.00	0.60	1.60	−0.34
11	−0.18	0.32		−1.00	−1.10	−0.30	0.35	0.03	0.70	0.10	0.70	0.40	−0.09
12	−0.26	0.42		0	−2.10	2.10	0.64	−0.17	−0.30	0.70	0	0.24	−0.51
13	−0.69	1.63		0.20	0	1.20	1.22	−0.48	0.60	−0.30	−0.10	0.10	−0.43
14	−0.50	1.03		−0.60	0.10	0.90	0.45	−0.55	−0.10	−0.10	0.40	0.44	−0.73
15	−0.16	−0.18		−0.10		−2.60	0.58	−0.74	0.40	−0.40	−0.10	0.58	0.34
16	−0.64	0.12		−0.60		−0.20	0.92	−0.66			−1.60	0.50	−0.01
17	−0.57	−0.92		−0.40			0.56	−0.55			−0.10	−1.67	0.30
18	−0.64	0.88		−0.30			1.08	−0.59	−2.2		−1.60	−0.43	−0.15

TABLE 17 (CONTINUED)

Sex differences: Section B (see Sources of Data)

Age (years)	14 *Victoria, New South Wales*	15 *St Louis*	16 *Slovaks*	17 *Pomerania*	18 *Schaffhausen*	19 *Zürich*	20 *Poles*	21 *Bohemian*	22 *Slovak-Hungarian*	23 *Frankfort*	24 *Nordhausen*	25 *Kötzling*	26 *Clingen*	27 *Dresden III*
4								–0.90	–1.30					
5								0	–0.60					
6		–0.60	1.30	0.40	0		1.10	–0.20	–1.20	–0.90	0.30	–0.60	0.80	0.40
7		–0.30	1.18	–0.50	0.20		0.10	–0.20	0.40	–0.70	0.60	–1.20		0.60
8		–0.30	–0.08	–0.60	1.60	0	–2.30	1.10	1.20	–1.10	0.30	–0.10	–0.60	0.50
9		–0.40	–0.58	1.50	1.00	0.80		–0.20	–0.50	–0.80	0.90	1.60	0.20	0.80
10	–0.40	–0.30	–0.61	1.10	1.00	0.70		0.20	–0.50	0.50	0.10	0.20	0.70	0.80
11	0	–0.60	–0.60	–1.40	1.30	–0.30		0.20	–0.10	–0.70	0.40	0.70	0.10	1.00
12	0.60	–0.20	–1.27	1.10	–0.10	1.20		1.10	–1.60	–0.70	–0.10	1.30	–1.50	1.30
13	–0.30	0	0.82	0.10	0.80	0.30		–0.10	0.20		0.60	–0.40	–0.70	1.00
14	1.00	–0.60	0.05		0	–0.60		1.60	–1.10		–0.40		0.70	
15	0.80	–0.10	0.18		–0.10			–0.30	–3.00					
16	0.80	0.20	–0.66		–0.70			–1.40	1.20					
17	0.70	0.60	1.92					–0.90	3.40					
18	0.70	–1.10						0.90	1.40					

TABLE 17 (CONTINUED)

Sex differences: Section B (see Sources of Data)

	28	29	30	31	32	33	34	35	36	37	38	39
Age (years)	*Dresden IV*	*Hebrew I*	*Hebrew II*	*Jewish: Massachusetts*	*Sicilian: New York*	*Neapolitan: New York*	*S. European: Hawaii*	*S. Italian: Massachusetts*	*American Negro*	*Sioux: Pure blood*	*Sioux: Half-blood*	*Navaho*
4		−2.60	−0.40		.30	1.20			0.05			
5		−0.20	0		−0.50	0.80			0.36			
6	1.80	−0.20	−2.20	−0.80	−0.80	−0.80	1.67	−0.50	0.59	1.30		0.16
7	1.60	−0.80	1.70	−0.10	−0.30	−0.90	1.74	−0.60	−0.67	−1.50	−0.40	1.40
8	0.30	0.10	0.10	0.10	−0.60	0.10	1.13	−2.30	−0.26	−0.20		1.40
9	0.90	0	−2.20	0.20	−0.60	−0.40	−0.04	−0.60	0.75	−1.00		0.24
10	1.40	−0.40	−1.20	0.50	0.20	0.50	0.52	−0.30	0.88	−0.30	0.30	1.60
11	0.80	−0.50	−0.20	0.40	0.80	0.40	0.50	0	0.24		−0.60	1.44
12	1.60	0.10	0.70	0.30	1.20	0.30	0.15	1.90	0.52	−0.60	0.50	0.92
13	1.50	−0.20	1.60	0.10	1.50	−1.20	−0.17	1.20	−0.11	−1.00	−0.40	−0.52
14		0.30	−0.20	0.30	−0.40	−1.00	−0.62	1.30	0.72	0.50	−0.60	−0.12
15		−0.60	−1.30	−0.60	0.10	−0.60	−1.56	−0.30	0.30	2.10	−0.30	−0.16
16		−0.40	−2.50	−1.30	−2.00	−2.50	0.48		−0.10	0.20	0.90	−0.20
17		−0.50	−1.30		−1.80	1.50	−3.03		−0.70	−0.90	−0.30	0.12
18			−0.80		−0.10	0.30	0.40		−0.76	−0.40	0.20	1.24

TABLE 17 (CONCLUDED)

Sex differences: Section B (see Sources of Data)

	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Age (years)	*Maya*	*Pueblo*	*Chippewa*	*Hawaiian*	*Hawaiian-N. Europe*	*Hawaiian-S. Europe*	*Hawaiian-Asiatic*	*Hawaiian-Asiatic-European*	*Chinese: Hawaii*	*Chinese: Chekiang*	*Chinese: Hawaii*	*Japanese: Hawaii*	*Japanese: Hiroshima*	*Japanese: Seattle*	*Korean: Hawaii*
4	−0.80														
5	0														
6	−1.10	−4.10	−1.90	5.88	−1.37	1.30	−1.02	0.73	0.03	1.97	0.56	0.48	1.30		4.12
7	−1.10	−0.90	1.50	1.26	2.23	0.39	2.08	0.66	−1.01	1.70	2.09	0.61	−0.10	0.30	2.21
8	−0.60	−1.60	−1.14	0.64	−0.65	0.78	1.66	5.37	−0.84	3.16	0.62	0.68	−1.10	2.00	1.84
9	−1.00	−1.40	−0.54	0.34	1.05	1.83	1.38	2.88	−0.56	−1.21	0.68	0.76	1.80	0.30	2.84
10	−1.80	−0.50	2.81	1.89	0.24	−1.11	3.06	−1.93	−0.55	−1.73	0.03	0.39	−0.30	0.90	3.31
11	−1.60	−2.00	1.43	0.95	1.03	0.79	0.52	3.35	0.10	−1.11	0.88	0.07	−0.10	1.50	0.31
12	−1.50	−1.00	0.58	−0.14	1.62	0.24	−0.35	0.70	−0.16	−2.74	0.01	1.49	0.10	0.90	−0.86
13	−0.70		−0.89	2.44	0.81	0.50	−0.67	1.86	−1.23	−1.95	0.19	1.67	−0.60	0.60	−2.42
14	−0.90		1.37	1.24	−0.04	0.63	0.91	−0.30	−0.32	−0.35	0.22	−0.03			0.69
15	−0.30		−0.71	−1.14	0.07	−0.17	0.55	−0.99	−2.39	−1.63	0.34	−0.13			−2.11
16	−1.10			−0.62	−1.37	−0.01	1.61	0.59	−1.88	0.66	−0.03	0.14			2.19
17	−1.10			0.41	0.05	1.65	−3.37	−4.32	−0.30	−0.59	−0.41	−1.53			5.13
18	−2.20			−2.47	0.41	−4.97	−1.15		−0.01	−2.47	−0.61	−1.56			

Sources of Data

A. *Preschool*

(Tables 1, 2, 4, 10, 11: Figures 1, 2)

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THE CONCEPT OF SOUL IN HAITIAN VODU

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UNDERLYING the welter of diverse and apparently trivial practices that characterizes primitive religions, there are, as a rule, a limited number of general ideas which give cohesion to the system and a pattern of ritual which is implicit in all ceremonies, public and private. Vodu, the folk religion of Haiti, is a complex amalgamation of beliefs and rites of African and European origin, which is constantly subject to innovation and modification of procedure and interpretation. At first the very rich variety of practices and beliefs seems to be a serious obstacle to a clear understanding of Vodu, but there can be no doubt that a patient comparison would reveal the recurrence of the same types and sequences of rites in countless ceremonies which, on the surface, seem to differ in their nature and intent. Similarly, such a study would do much to define the metaphysical concepts of Vodu and to clarify their relationship to ritual practices.

In particular, the concept of the soul in Haitian Vodu requires study and analysis, for clearly it is an important notion underlying many of the characteristic religious attitudes and practices. Such a research is made somewhat difficult by the wide range of beliefs and theories found among Haitian Vodu worshippers, according to their intellectual sophistication, their religious background and contacts with the modern world.

My interest in this problem was aroused by Marie Noël, a lively and sympathetic woman who was acting as an informant at the Bureau of Ethnology in Port-au-Prince. When I met her, she had just undergone treatment to restore the failing strength of her soul. She was, therefore, in a good position to describe fully the rites that had been performed in her behalf and, being an intelligent woman, to add comments and details that gave me significant insight into the Haitian concept of soul. Mr Lorimer Denis, head of the ethnographical department of the Bureau of Ethnology, and Mrs Odette M. Rigaud, a keen expert of Haitian folklore, assisted me in my interviews with Marie Noël and other informants. They also have carried out investigations of their own which shed new light on the subject and generously made their material available to me. Among my other informants was an hungan (a Vodu priest), Desire,

whose explanations did not always coincide with those of Marie Noël. He was a rather sophisticated person, but it was my impression that Marie Noël's candid statements reflected more closely the general beliefs of the Haitian peasantry.

THE CONCEPT OF SOUL

At the outset it may be said that there is in Haitian Vodu no sharp differentiation between the common European concept of the soul and the beliefs which are of African origin. As in Africa, the duality of the soul is usually admitted, but it is thought of both as soul in the Christian sense and as a guardian angel.

Every man has, therefore two souls, the Gros-bon-ange, "the big-good-angel," which animates the body and corresponds roughly to the Christian notion of the soul, and the Ti-z'-ange or Bon-ange, "little angel" or "good angel," that protects a person against all dangers by day and by night. The souls are identified with the double shadow cast when the light is favorable, particularly toward the evening. The Ti-z'-ange is the pale thin fringe around the darker shadow, which is the image of the Gros-bon-ange. This double shadow should not be confused with the shadow as ordinarily seen; this is called the Ombre cadavre, "shadow of the corpse." Nevertheless my informants had great difficulty in making clear the distinction between the different shadows.

It is the general opinion that dreams are produced by the wanderings of the Gros-bon-ange when it abandons the body during sleep. The sleeper becomes aware of the adventures of the Gros-bon-ange through the Ti-z'-ange who remains by him as a protector and yet never loses sight of the Gros-bon-ange. He wakes the sleeper in case of danger and even flies to the rescue of the Gros-bon-ange if this faces real danger.

The duality of the soul and its relationship to the body were confirmed by the hungan Desire, but he disagreed with Marie Noël and others as to the respective functions of the two souls. He insisted that dreams were produced by the wanderings of the Ti-bon-ange while the Gros-bon-ange remained "over you," ready to act in case of danger. "If you are attacked," he told me, "it is he who protects you. The Ti-z'-ange is a capon [a coward] who runs away."

The Ti-z'-ange enjoys a reputation for truthfulness. (Ti-bon-ange pas gain droit mentir, "The little good angel has no right to lie.") It is even inadvisable to doubt his statements. If, having been forced to make the same statement three times, he were to say, En vérité trois fois ça même di, c'est vrai ("Truly I have said three times that it is true"), anyone who still hesitated to believe him would have little chance to live long. The following anecdote was told to me as an example of Ti-z'-ange's truthfulness.

A man who had fallen into poor circumstances asked the woman with whom he lived to help him with her savings. This she refused to do, although her lover had always been kind to her and her children. She kept insisting that she had not a penny. Tired of begging her and moreover convinced that she was lying, he consulted an hungan. The latter promised to learn the truth from the Ti-bon-ange of the woman during her sleep, "for the Ti-bon-ange cannot lie." The Ti-bon-ange was summoned and without ado admitted that the woman kept the money sewed in her pillow. On the following day, the man again asked the woman to give him part of her savings. When she refused he went straight to the pillow, opened it with his scissors and found the hidden treasure. To justify herself the woman explained that the money belonged to her children. Nonetheless the man took it, remarking that if she preferred her children to him, they could not continue to live together.

THE SOUL AND WITCHCRAFT

A certain amount of immunity against witchcraft may be obtained by requesting an hungan to extract the Gros-bon-ange from the body and to enclose it in a bottle. The soul, removed from its bodily envelope, may either be hidden or buried in a garden or entrusted to the hungan for safe keeping. The procedure, however, offers some drawbacks. Truely enough, it is difficult to kill a person whose soul has been hidden, but if the charm against him is powerful, he may suffer such agony that of his own accord he will ask to have his soul returned so that he may die in peace. To illustrate this point, Marie Noël told the following story about her best friend, Sarah.

Sarah had been bewitched by a woman named Alexina who had resorted to the help of a sorcerer. As a result of these machinations, Sarah fell very ill and Marie Noël had to take her to Jacmel where she was treated by an expert hungan. She recovered rapidly "because she had right on her side." When she returned to Port-au-Prince she was burning with desire to take revenge on her tormentor. With the assistance of a sorcerer she bewitched Alexina who in her turn was afflicted with a mysterious disease. For seventeen days she could neither drink nor eat and she suffered excruciating pain; yet she could not die because her Gros-bon-ange had been removed and hidden in her home. Finally, incapable of bearing her agony any longer, she asked the mambo [Vodu priestess] in whose house she was hospitalized, to call her brother. She told him to go to her house and to bring a bottle which she kept near her pillow. When the brother returned with the bottle, she had it opened, drank three sips of water and died.

I also was told about the case of a mambo who had removed the soul of each of her children and enclosed it in a bottle. Whenever she performed the operation, she told them, "The child in the bottle is the Gros-bon-ange. By taking it away from you and putting it in a bottle, I prevent any living being from doing you any harm." (Ti mun bouteille là c'est Gros-bon-ange nu qui là dedans.

Si moin retiré Bon-ange-là metté dans bouteille, c'est pour Chrétien vivant pas faire nou mal.) One of her sons who had divorced, hastened to remove from the conjugal house the trunk in which he kept the embottled soul lest his former wife do him some harm.

An historical tradition, which I owe to the courtesy of Mr Lorimer Denis, may be adduced as a further example of the belief in the advisability but also the dangers of storing away the soul.

During the civil war between Salnave and Boisrond Canal the former left his soul in a humfor (sanctuary). But his rival had also entrusted his soul to the guardian of the same sanctuary, who was his close friend. Learning from him that Salnave's soul was in his care, Boisrond Canal pressed him to sell it to him. At first the priest refused to break his pledge, but finally he yielded. Thus Boisrond Canal succeeded in defeating Salnave, whom he had shot.

It is on the Gros-bon-ange of a person that witches operate. Through conjurations they cause it to appear in a bucket of water as the exact, but reduced reflection of the victim. They stab the image with some sharp instruments; if the thrust has been successful the water turns red.

The famous zombies are people whose Gros-bon-ange has been captured by some evil hungan, thus becoming living-dead. Only the Ti-z'-ange, who hovers over him, has been left to the unfortunate zombi. A person deprived of his soul by a sorcerer appears to die. After he has been buried, the hungan goes to the cemetery at midnight and calls him three times by his name. The "corpse" gets up and is slapped three times by his new master. Henceforth he is a zombi, who during the night works on the plantation and during day time is shut in the hungan's homfor. Zombies may be easily recognized by the nasal tone of their voices, their sleepy appearance and their lowered heads. If they happen to taste salt, they drop their crushed attitude, raise their heads and look their tormentor in the eyes. They even recover the strength to escape. Marie Noël had known an hungan of the Artibonite region who had many zombies at his service. After his death his wife served the zombies some seasoned food. They left the sanctuary where they had been captives and took to the road. Marie Noël described in vivid terms how they walked with dull expressions and lowered heads. Some spoke normally, others uttered nonsense. To inspire pity and stimulate charity, they went about telling their tragic story. Invariably they would end with these words: "Madame, we are hungry; charity please, for three days we have been on the road." Finally they were arrested by the Haitian Guarde and forced to work in jail.

A CEREMONY TO STRENGTHEN THE ENFEEBLED SOUL

The Ti-z'-ange is apt to lose its strength, thus causing the person under its guardianship to suffer dizzy spells and to feel in his head something "like a draught of air." Such were the symptoms which made Marie Noël aware of the weakened condition of her Ti-z'-ange and prompted her to undergo a special ceremony to restore its health.

She placed herself in the hands of a woman relative who was not a mambo (priestess), but a servante-mystères, that is to say, a person who served the family gods. The preliminary ceremony in such a case is called a laver-tête, a washing of the head. The servante-mystères poured cold water in a wooden trough (gamelle) and washed the head of the penitent with almond soap to purify her. She dried her hair with a piece of clean white calico. Then she rubbed Marie Noël's head with the foam produced by mombin leaves, while she recited, "Dieu le Père, Dieu le Fils, le Saint Esprit," three Paters and three Ave Marias. She dried her hair with another piece of white cloth.

The second part of the ceremony consists mainly of offerings and prayers. The penitent, dressed in white, sat on a small chair in front of a white table cloth on which were served bread, candies (bonbons sirop), maize flour, wheat flour, an egg, white and red wine, and syrup (liqueur). Such offerings are called couvert blanc (white cover) and are destined for the loa blancs (white gods), all of whom are sea deities: Damballah, Erzulie-Freda, Agoué, Philomène, Lovana, La Sirène, Mamzelle Aida, and La Baleine (Whale).

In a new calabash (coui) near the offerings, the penitent placed bread crumbs, broken candies, various flours, white wine, and syrup. She broke an egg and put the yolk in the calabash and the white in a small cup. She then sat on the ground with outstretched legs and with the calabash in front of her. As she stirred its contents, the servante-mystères and the participants sang:

1. Saint Pierre ouvri la porte (*bis*)
   La Porte de Paradis.
   Saint Pierre ouvri la porte
   De Paradis. (*bis*)

2. Bon Dieu, j'en vous
   C'est la demande (*bis*)
   A lay caye je vous mène
   Pardon, Bon Dieu
   Caye c'est péché

1. Saint Peter open the door (*bis*)
   The door of Paradise.
   Saint Peter open the door
   Of Paradise. (*bis*)

2. Good God, I . . . you
   It is the request (*bis*)
   To the house I take you
   Forgive, Good God
   House, it is sin

C'est votre amour, j'en si faché (*bis*)	It is your love, I am so sorry. (*bis*)
Ou fait man penitence	You make me repent
Nan caye la moi menè ou	I am taking you to my house
Pardon moin innocent.	Forgive, I am innocent.

The first song is a request to Saint Peter, who is identified with Legba, to permit the ceremony to be held. The second song, which contains obscure verses, was interpreted as a prayer to placate the wrath of God against the sinner.

The servante-mystères stretched out a kerchief on the ground and presented the calabash successively to the four cardinal directions. Marie Noël took the calabash from her hands and poured its contents over the kerchief. The servante-mystères and other women lifted the kerchief by its corners, oriented it, as had previously been done with the calabash, and tied it up poultice fashion on the forehead of the kneeling penitent. The servante-mystères uncorked the bottle of perfume reserved for the Ti-z'-ange and emptied it on Marie Noël's hair.

The servante-mystères set the table for the loa (gods). She placed on a white napkin a dish containing the same foods as those constituting the poultice. Then she took an egg, consecrated to Damballah, that is to say, marked with ritual signs traced "on Damballah's point" (under the invocation of Damballah). Starting with the east, she presented the egg to the four corners of the world and put it in the middle of the dish. She also invoked Saint Nicolas, guardian of the Sun, and the Saints who are mystères (gods). During this part of the ceremony, the servante-mystères was "montée" (possessed) by the god Damballah. Bottles of red and white wine and a bottle of syrup, a cup of water and three candles also formed part of the offerings. A "white" bed was brought near the offerings and the servante-mystères sang:

1. Vevè, vèvè, vèvè	1. Veve(r) [ritual design traced with flour]
Relez vero pour loa yo (*ter*)	Call . . . their gods [3 times]
Relez vero pour loa Damballah	Call for god Damballah
Relez vero pour Agouè-taroyo	Call . . . for Agouè-taroyo
Relez vero pour la Sirène, la Baleine.	Call for the Sirene, the Whale.
2. Ya ruman, ruman, ruman	
Ea ruman ruman	
Yo ea par certain ya gaigné nou	They are not certain to gain you.
Narcisse o coranie	

3. O Damballah wedo, Tocan è	3. O Damballah wedo, Tocan è
Aida Maîtresse, caye moin	Aida mistress, my house
Mamzelle la Sirène, la Baleine	Miss Sirene, the Whale
O maitresse caye-lá	O mistress of that house
Damballah wedo, Tocan è	Damballah wedo, Tocan è
Ou pr' allé quand là retourné,	When you shall go and return there,
Ç'a qu'a recevoir?	Who will receive you?

The second song is in "language," that is to say, in nonsensical words which are supposed to reproduce the African dialects spoken by certain gods. The third song was explained by Marie Noël as a question asked of the gods. They were urged to say who would be home to receive Marie Noël when the servante-mystères would be dead.

Then the penitent went to bed with a little candle on either side and an eternal lamp (an oil lamp with a wick floating on a wooden cross) burning behind her head.

On the following morning, Marie Noël awoke and washed her face and mouth. The servante-mystères removed the poultice and threw it in a pit which she had dug in the courtyard. She took the egg from the dish, oriented it, made the sign of the cross over Marie Noël's head, and cast the egg into the pit. Marie Noël made three libations of water, wine, and syrup; first into the pit and then on the threshhold of the door in honor of Damballah. She also drank a sip of each liquid. Likewise she made three offerings of all the foods. Afterwards she invited the servante-mystères and all those who were present to partake of the remaining food. Whatever was left of the meal was thrown into the pit in which was also buried a bottle of perfume Bois de Paris. The ceremony to restore Ti-z'-ange's strength and Marie Noël's health was ended.

THE SOUL AFTER DEATH

For nine days after death the Gros-bon-ange roams near the corpse as a ghost. The Ti-bon-ange hovers above the corpse for the same length of time and then returns to heaven. The loa who was in the head of a person, that is to say, the loa who used to possess him, must be removed by means of a ceremony called dessonin which takes place either immediately after death or some time later in the cemetery.

The Gros-bon-ange goes down to the water (en bas de l'eau). Later, when the economic circumstances of the family permit or when the gods insist, a ceremony is performed to draw the soul from the water. Ordinarily the ceremony

takes place near a river, a lagoon, or a fountain, but if there is no body of water in the neighborhood, a trough (gamelle) or a bucket may be used as substitutes. Mrs Rigaud witnessed part of one of these ceremonies aimed at raising the souls from their watery abode. It was celebrated at night. Hunsi (assistant priestesses) dressed in white entered the sanctuary (humfor) and came out carrying jars (govi) wrapped in white cloths on their heads. They walked through the peristyle (dance shed) toward a tent (niche) set near a trough full of water. Some of the women suddenly were "mounted" (possessed) by loa (gods) and started to whirl around. People supported them to prevent them from collapsing. They all kneeled near the tent under which burned a candle. The crowd approached and the hungan was possessed by a certain Macedoine, a man who after his death had become a god. Macedoine behaved like a Guédé god (gods of death), that is, he spoke with a nasal tone, used bad language, and continually asked for clairin (brandy). The loa probably was influenced by the proximity of the Feast of the Dead which is under the Guédé's patronage.

The ceremony opened with songs dedicated to the Virgin and with invocations to Philomène. The hunsi made the responses. After blowing out the light and warning the participants not to disturb the rites, the hungan shook his rattle in a monotonous way. Suddenly a sound was heard as if something was coming out of the water in the distance. The hungan asked the dead person to identify himself. A strong but infinitely tired voice was heard calling to several persons in the audience. They answered by crying: "Victoria, Victoria, where are you? Answer us, Victoria!" "Yes, Papa, here I am." "Victoria, do you hear us?" After contact was established, a conversation followed about the duties which the family owed their dead relative. One after another the souls of the dead called from the water. Members of the families were addressed, consulted, and often were reprimanded. Now and then the hungan interrupted a conversation with some obscene remark or by a request to the dead person to go away and not to monopolize in private conversation the time of the ceremony. Sometimes a shy or stubborn dead person hesitated to come until the hungan had urged him to appear. Some dead, angered at their relatives' remissness, abused them. In such cases a lively discussion took place between the living who justified themselves on the ground of poverty and the dead who refused to listen to their excuses. Then Mrs Rigaud heard a voice so low that it was barely audible above the sound of the rattle. It was as if someone was coming from far off, softly complaining. The voice said, "I am very cold, my child. Why did you abandon me?" The daughter of the dead woman sobbed, for she

had not known that her dead mother would come that night and had not even brought a jar for her soul. She begged her to be patient. The voice faded away and disappeared with a watery sound.

Sometimes a dead person would express his resentment at the absence of a relative. Those present explained that illness had prevented his coming and assured the dead man that nonetheless he had shared in the expenses of the ceremony.

The voices varied considerably: some seemed old, others young; familiar expressions were interspersed with laments and coughs. The hungan spoke "language." The voices mingled more and more, the gurgling of the water could be heard every time a dead person appeared. The crowd was tense—now silent, now shaken by a fit of nervousness. They laughed at the hungan's jokes, retorted to the insults and sarcastic remarks of the dead, and were moved by the complaints of those who were freezing under the water. But from time to time, they also yawned and lost interest.

The ceremony was interrupted by a shower and no more could be observed.

In a sanctuary near Port-au-Prince, the mambo showed me on her altar five white pots which contained the souls of her dead relatives. A pot decorated with a necklace enclosed, not the soul, but the god of one of her cousins. The spirit of the man was still under water because his family, who were shiftless people (vagabonds), refused to celebrate the ceremony for the raising of the soul.

On the steps of the altar (pé) in the same sanctuary were three jars sheltering the souls of unrelated persons that had been entrusted to her. The mambo explained that on certain occasions she summoned them for the families who wanted to consult them.

These brief notes indicate that the Haitian popular concept of the soul is extremely complex. Its duality is a legacy of West Africa where the plurality of the soul is a widely held belief. Any weakness of one of the souls is reflected in the physical condition of the person whom it animates. After death, one of the souls goes into the water whence it must be extracted sooner or later if the family does not wish to incur its wrath. Immunity against witchcraft may be obtained by extracting the soul from the body and hiding it, a belief shared by many people in the world.

Further researches will show that the concepts which we have attempted to define here have wider implications and underlie many attitudes and practices of Vodu. Funeral rites in particular deserve a thorough analysis in the light of these beliefs.

WASHINGTON, D. C.

SOCIAL ORGANIZATION AND BELIEFS OF THE BOTOCUDO OF EASTERN BRAZIL[1]

CURT NIMUENDAJÚ

INTRODUCTION

THE TERM "BOTOCUDO" has been applied to three wholly distinct people:

(1) The Boruñ,* to use their native designation for themselves, officially designated by the Serviço de Proteccão aos Indios (S. P. I.) as Aimoré. These, the people visited by Prince Maximilian of Wied and by Manizer, form the subject of the present notes. They formerly lived from the Rio Pardo southward beyond the Rio Doce, in the Brazilian states of Bahia, Minas Geraes, and Espiritu Santo. For the time being I consider their language isolated.

(2) The Botocudo of Santa Catharina and the adjoining part of Paraná. These are Jules Henry's "Kaingang"; I consider them related to the Kaingang proper, but not identical with them in either speech or culture. There are two subdivisions of them. The larger one, visited by Henry in 1932-1934, lives in Santa Catharina at the post Duque de Caxias of the S. P. I.; the other, located at the post São João of the S. P. I., somewhat south of Porto União in Paraná, embraced, according to H. Baldus, about twelve individuals five years ago, but has probably become extinct since. Linguistically, these people (whom I have never visited) fall into the category of Southern Gê, which also comprises the Kaingang, Guayanã, and Ingain.

(3) The Botocudo between the middle Rio Ivahy and the Rio Piquiry, in the state of Paraná. These are called Kúru-tõ by the Kaingang, Ivaparé by the

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1 Typing for this paper was done by personnel of Works Projects Administration Official Project No. 665-08-3-30, Unit A-15. The translation from the German manuscript is due to Robert H. Lowie, who has also incorporated a few statements from his correspondence with the author and a few references to other authors.

The author, contrary to his physician's advice, undertook another expedition to the Tukuna of the upper Amazon, among whom he died in December, 1945—R. H. L.

* Orthographic note: The acute accent over a vowel indicates stress; the tilde over a vowel indicates nazalization; a short right-turned hook below a vowel designates it as postpalatal. Because of limitation of type available, in some cases accent and tilde follow the vowel. For the same reason O· is substituted for õ (as in German *ohne*). š is equivalent to English *sh*, č to Spanish *ch*—Editor.

Guaraní. They coincide with Th. Borba's Aré, H. von Ihering's Noto-Botocudos, and V. Frič's Šetá. These people are nomadic, unwarlike, and extremely shy. They have never been scientifically investigated. In 1912 I saw two captives from this tribe among the Kaingang of the Rio Ivahy. Their language proved to be Guaraní.

Samples from the speech of three unrelated "Botocudo" groups

	Guaraní	*Botocudo (Ivahy)*	*Botocudo (Rio Doce)*	*Botocudo (Sta. Cath.)*	*Kaingang (São Paulo)*
sun	kwarahí	pái	tepó	la	rä
moon	dya+sɨ	pái	mõyák	koičó	kɨšá
fire	tatá	tatá	čompék	peñ	pĺ
water	ɨ	ɨ	māyáñ	ñgoio	gõ´yo
head	akã´	akã´	kren	kreñ	krĺ
eye	tetsá	tečá	kẹtóm	kuná	kané
ear	nambí	nambí	híõñón	niñgná	niñgrẽ
mouth	dyurú	yurú	kiyapikí	nyatkú	yantkɨ
nose	apɨ¯gwá	čapɨtá	kayídn	neyá	ninyä´
tongue	kũ	kũ	kiyičóg	nuná	noné
tooth	tã´i	tã´i	kiyúdn	iyá	inyä
hand	po	po	po	niñgá	niñgé
foot	pɨ	pɨičá	po	pan	pen
house	tapɨi	tapɨi	kiyém	en	in

In March 1939 I heard in Theophilo Ottoni that a remnant of the Poyišá tribe of the Botocudo still survived on the upper São Matheus. In Itambacury, 40 km southwest of Theophilo Ottino, I found a man personally acquainted with all the survivors. He said there were four pure-bloods, all fairly young, married to Neo-Brazilians, and residing apart from one another at a distance of about 8-10 leguas to the east. The news rendered a visit to the Poyišá useless. This tribe was probably the last one to abandon hostilities against the Government (ca. 1910).

In Itambacury itself there now live only half a dozen mixed-breeds and three old pure-blood Indian women, only two of whom were actually there at the time of my stay. One was of the Aranáñ, the other of the Potéñ tribe. The latter could be used as an informant; gave me her pedigree and kinship terms; also

explaining certain matrimonial rules. In contrast to Manizer's statement, she considered all cousin marriages taboo and denied that cases of polygyny were correlated with the levirate or sororate. She could not grasp the idea of parent-in-law avoidance.

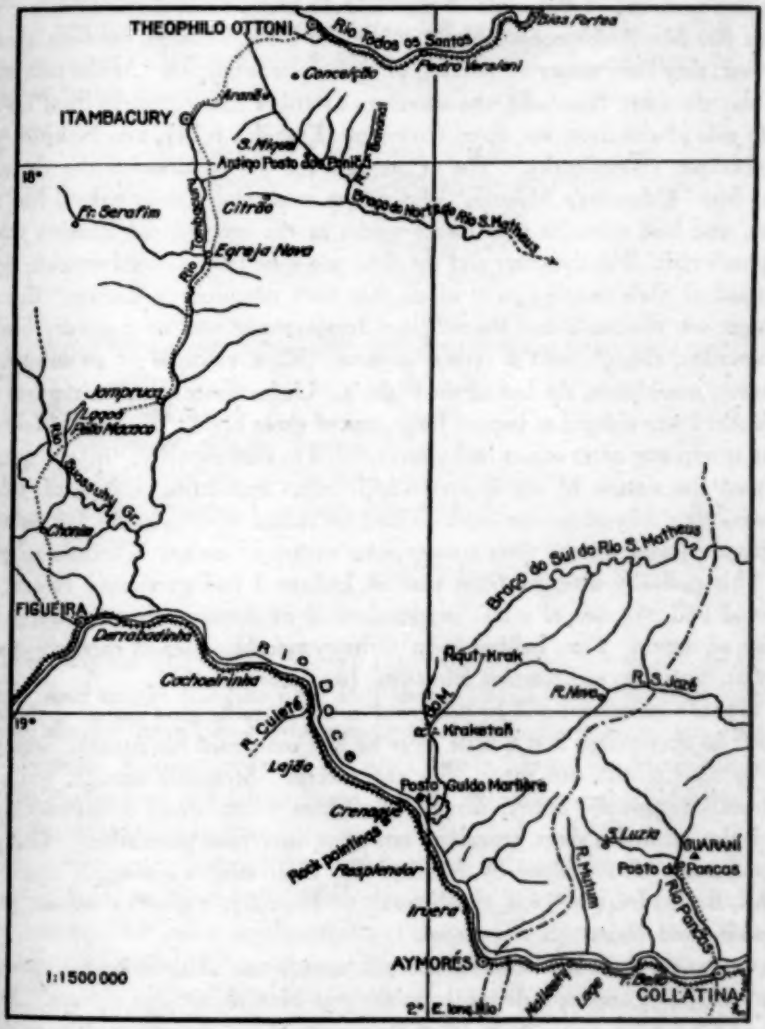

FIG. 1. Area in eastern Brazil occupied by the Botocudo.

Turning from the Northern Botocudo to those of the Rio Doce, I found two posts of the S. P. I.: Guido Marlière, directly on the left bank, near the railroad station Crenaque, in the state of Minas Geraes; and Pancas, 44 km north of Collatina, on the same railway line, in the state of Espiritu Santo. In Guido Marlière there are 35 Botocudo of the Nakrehé tribe, whose original habitat was in the Rio Manhuaçú region, south of the Rio Doce. Except for their speech, however, they have preserved nothing of their ancient culture. At the post there are also six other Botocudo, the survivors of tribes that formerly lived on the north side of the river, viz. three Čonvúgn (Krenák's tribe), two Naktúñ, and one Nakpie (Ñgut-krak). The Čonvúgn are the children of the deceased chief Muĭ́ (Manizer's Mouni),[2] who still wore earplugs, went naked, had two wives, and had relations with marét spirits at the time of the Russian ethnographer's visit. His daughter and the older son were useless as informants, being ashamed of their people's past, which they were unwilling to discuss. But the younger son obviously had the religious temperament and gave sundry bits of information, though with a certain shyness. Most valuable as an informant, however, was Hąnát, the last of the Nakpie. Unfortunately his Portuguese was such that I was obliged to import Jorge, one of those highly "civilized" Nakrehé, as an interpreter after others had utterly failed in that capacity. Hąnát quickly grasped the nature of my interests and began recounting stories of spirits, spooks, etc. His narratives were limited to rather brief episodes but in their aggregate (some thirty) these convey some notion of ancient Botocudo religion.

This radically diverges from that of Indians I had previously visited, for I could find no trace of a cult of the dead or of demons, nor of astral myths or were-animals. They believe in an anthropomorphic celestial race, the marét, who are well-disposed towards humanity (see below, p. 101).

Hąnát's statements will be presented in the form he gave them. I confined myself to questioning him a little after he had completed his remarks, inquiring for familiar motifs, but rarely with any success. Strangely enough, while the Botocudo regard the Sun as a male, the Moon is considered a bisexual being.

I also secured a short genealogy extending over four generations. Comprising persons also utilized by Manizer for illustrating sociological conditions (Muĭ, Beréñ, Iniat = Nya, and Kęprúk = Kaprùk), it partly confirms, partly amplifies and revises his statements.

At Pancas there were thirteen Botocudo, only one of them belonging to the Minyáñ-yirúgn originally living here, the rest Nakrehé.

2 H. H. Manizer, *Les Botocudos d'après les observations recueillies pendant un séjour chez eux en 1915* (Archivos do Museu Nacional de Rio de Janeiro, vol. 22, 1919).

TRIBES AND GOVERNMENT

The Botocudo lack a generic designation for themselves, since Borúñ (Borų́gn) in their language denotes *any* Indian, irrespective of tribal affiliation. On the other hand, they distinguish the several Botocudo tribes, some of which comprised several bands, each under a special chief.

The country seems to have been regarded as *tribal* territory, within which the constituent bands were permitted to roam at will. In any case the tribal designations are mostly topographic:

Nak-pie	land of labor
Nak-tuñ	land of the ant-hill
Nak-rehé	beautiful land
Ñgut-krak	tortoise rock
Minyã-yirúgn	white water

In April 1939 the surviving Botocudo represented the following groups:

(a)	Near Itambacury	
	Naknyanúk, Aranã́, Poyičá	10
(b)	At Guido Marlière, on the Rio Doce	
	Naktúñ, Nakpie, Čonvúgn, Minyã-yirugn	8
	Nakrehé	50
		—
		68

Originally the Naknyanúk had the upper Rio Mucury for their habitat; the Aranã́ lived on the Rio Suaçuhy; the Poyičá (Jiporoc) on both banks of the middle Mucury, from São Matheus to the Jequitinhonha; the Naktún, Nakpie and Čonvúgn (Crenac) north of the Rio Doce, in Minas; the Minyã-yirugn in the Rio Pancas area, in Espiritu Santo; and the Nakrehé south of the Rio Doce in the Rio Manhuaçu region.

My informants mentioned two semi-legendary tribes. The anthropophagous Tombrék in the interior of the woods north of the Rio Doce were said to lack huts, residing between the root-buttresses of the gamelleira trees; Raulino declared that the tribe consisted solely of men. Secondly, there were the Poyekrẹ́gn, also called Nem-rõn because of their long bows. These are peaceable hunters, but prone to abduct children. According to Raulino they are usually invisible, but

once his father had seen them roving past him in the forest. They called him over and presented him with one of the two deer they had killed.

Among the Botocudo "the strongest" has always been leader, as the Indians say even today. However, "strength" does not imply physical strength (nyipmrõ), but supernatural power (yikę̃gn). All the chiefs whose names I obtained were yikę̃gn, as I determined from explicit statements.

Two facts suggest that the former chiefs were in higher measure responsible for the band they led than the chiefs of other tribes. In the first place, a whole series of Botocudo chiefs' names has come down to us, while the literature records not a single name of the chiefs of adjoining tribes. Further, several Botocudo tribes and bands were permanently named after their leaders. Secondly, the disproportionately large number of chiefs who fell as victims of blood-vengeance in the feuds of yore is a striking fact; it is as though they alone were reckoned responsible. Hąnát gave me a list of eleven leaders of the Nakpie and Čonvúgn tribes. Of these eight—Biyá·n, Ketk, Nu-tniṹ, Tečúk, Berén, Tomhé, Lim, Krenbá—were murdered; Krenák, Muĺ, and Yukñiát died from sickness.

One of the most characteristic features of social life among the Botocudo was the constancy of their blood feuds, not only between distinct tribes, but even between bands of the same tribe. Sexual jealousy, highly developed among all the Botocudo, was doubtless a cause of this phenomenon, but neither the only nor the principal one. For the most part the acts of revenge formed an endless chain, and neither of the parties concerned could recall the origin of the feud. Strangely enough, I learnt of no case in which a person had been killed for suspected malicious sorcery, nor does this motif occur in any of the tales recorded by me. The following accounts were secured.

Ho·a with four companions went to Kurík, a fellow-Nakpie; all he wanted was to ask him for bananas and go back home. But Kurík and three of his comrades were lying in ambush along the road. He killed Ho·a and his father and drove the others to seek safety in flight. For a while the survivors concealed their hatred. Then, one day ten of them paid Kurík an amicable visit. Each took up a position beside one of Kurík's men, and on a prearranged signal they killed him and all his followers except one, who made his escape.

The Čonvúgn murdered O·raũ because they envied him his two wives, in whose company he was visiting them. However, the widows did not remain there, but returned to their family.

The Nakpie and Čonvúgn were living together. A Nakpie married a Čonvúgn woman. When the tribes separated, this Nakpie remained with his wife's tribe, which killed him. When the Nakpie again met the Čonvúgn, they feigned friendli-

ness, but attacked them at night and killed all but eight persons. However, subsequently the Čonvúgn increased again.

KINSHIP TERMS

The following list was secured in March 1939 from Cunigundes, one of the last survivors of the Naknyanúk tribe. She belonged to chief Potéñ's band, which in 1857 lived west of Theophilo Ottoni and whose remnants were subsequently transferred to the mission Itambacury.

ñgiopú·	mother, mother-in-law (w. sp.), stepmother
ñgiopú·-andyá·k	mother's sister, father's sister, mothers's brother's wife, father's brother's wife
ñgikę́·n	father; father-in-law (w. sp.), stepfather
ñgikę́·n-andyá·k	mother's brother, father's brother; mother's sister's husband, father's sister's husband
ñgia·k	brother, sister, cousin (male or female), stepbrother, stepsister
niñgrú·k	son, daughter, nephew, niece, daughter-in-law
niñgę̄dēná·n	grandson, granddaughter
ñgiyokę́n	husband, wife
niandyú	parent-in-law (m. sp.), son-in-law, brother-in-law, sister-in-law
vovó	grandparents (from Portuguese vovò, vovó)
ñikñinyám	grandparents (according to a Nakpie informant this is the ancient aboriginal term for grandparents)

[Manizer's article[3] gives no list of kinship terms, but offers several statements on the subject which may be compared with the foregoing. According to him male cousins are identified with brothers by the same father but a different mother; a niece and a "belle-fille" (daughter-in-law? stepdaughter?) fall into the same category. Further, the suffixes -nu, -na are said to give the meaning of paternal uncle and maternal aunt to the words for father and mother, respec-

3 Manizer, *op. cit.*, p. 262 f.

tively. "En cela comme dans l'appellation particulière du neveu, il semble que ce soit une coutume des Boruns, ainsi que des *Chanês, Kaingangs, Guaranys,* que d'appeler les tantes: mères,—les oncles: pères,—et les neveux: enfants." There are said to be diverse words for grandmother and grandson. Very interesting is the statement that the parents-in-law are called the grandfather (or the grandmother) of my son, in other words were designated teknonymously.

Incomplete as the list given by Nimuendajú doubtless is, his and Manizer's statements indicate at least a tendency toward a generation system—R. H. L.]

MARRIAGE

When Yumkrén wanted to marry Hąnát, she first spoke to her father, her mother being dead. He said, "Daughter, you are philandering with this lad. Do you want to marry him?" Thereupon she went to Hąnát and told him she wished to marry him. Then he arranged matters with her father.[4]

The genealogical table recorded gives evidence of five cases of sororal polygyny, one of non-sororal polygyny, and two instances of the levirate, as follows:

The chief, Tečúk, was simultaneously married to the sisters Ambyík and Ñgenúk; his brother, chief Krenák, with the sisters Nyimdók, Mẽyéb, and Ñgoén. Chief Beréñ, husband of the sisters Yamyí and Ñguté, married a third sister, Murágn, after Ñguté's death. Chief Muĩ́ was at the same time married to the sisters Tudn and Nya; their sister, Uihák, married another Indian. O·ráñ, not a chief, married the sisters Pangą́n and Karečú·.

Chief Yakíbm was simultaneously married to Keprúk and Guą́g, two unrelated women.

Polygyny, though not restricted to chiefs, was thus most frequent among them, but not all of them had more than one wife.

The levirate is illustrated by the following cases.

When Yakíbm died, his unmarried younger brother, chief Tomhé, took to wife one of the widows, Keprúk, who brought into the family two of her dead husband's children, Ueón and Tam. By Tomhé she had two more children, Uín and Tekrék. I was told that Tomhé would have married his brother's widow even if he had

4 Manizer mentions gifts to the girl's parents and the chief. He also cites the case of Tam, who had killed a capybara, which he offered to a man in exchange for his sister. However, she stayed with Tam only a single night. He represents it as a normal thing for men and women to change spouses. As a special case he cites that of Mui˜ and his brother Iniat, who changed wives because one of them desired to be a co-wife with her younger sister (*op. cit.*, p. 260 f.).

already had a wife. The second widow, Guũg, as well as her children, Yapi-á and Kančín, joined her father Parák and on his advice did not remarry.[5] Of Muĩ''s wives only Nya survived him; she married his junior half-brother, the unmarried chief Krenbá. By Muĩ´ she had a daughter, Sebastiana, and by Krenbá a son, João.

The levirate is not compulsory:

Yakíbm's second widow remained unmarried, while O·ráñ's widows both married men in no way related to the deceased, even though he had a younger brother, Hąnát.

My Nakrehé interpreter, Jorge, told me that in his wife's presence he was permitted to play with her unmarried younger sister as much as he wanted to; it only made his wife laugh, while she would resent such familiarity with another girl.

The Botocudo do not seem to have any notion of parent-in-law avoidance.

MARÉT AND MAGIC

In the sky there dwells a numerous race of spirits invisible to common mortals, who call them tokón. The spirits themselves grant others the power to see them and communicate with them; and by these favored persons they are called marét.

The marét are credited by Hąnát with ordinary Indian size and shape; but according to Raulino they are shorter by a head. There are males and females, adults and children. They live in wealth and abundance in the sky, owning everything of whatever kind is possessed by the "Portuguese," i. e. Neo-Brazilians, without having to work for it. They suffer neither sickness nor death.

The marét are kind and helpful toward mankind, never growing angry. At one time in the past the Indians did not have to work at all; marét gave them everything they needed. All one had to do was to turn to one of their chosen favorites who had relations with them, then they would send the desired boon through him. In hunting there was no need to make great efforts: the marét were asked through the intermediary for game and would send it. That is why the ancient Indians practised no hunting magic. Similarly, it was left to the marét to start a cultivated plot; at most the Indians would make a clearing and move away, finding the mature crop on their return.

These conceptions are illustrated by a number of episodes.

5 Manizer (*op. cit.*, p. 261) gives a different account of the second widow's fate: "Kwak, qui devint femme de Krenak (père du défunt) après une longue résistance. Elle alléguait à Mouni et Kristino, qui la voulaient persuader, qu'elle ne pouvait devenir sa femme après avoir été sa bru."

A man who had great supernatural power made a clearing and burnt the ground. Then he called his wife and left with her for another district. "Why, aren't you going to plant on your clearing?" his wife asked. "No," answered he, "I do not need to plant anything!" So they moved on. After a few months the man sent a kinsman from his band to inspect the plot. "What are you sending him to the plot for," the wife objected, "when you haven't planted a thing?" When the messenger got to the clearing, he found it full of the most varied fruits, all of them growing on a single stem. He brought back five corncobs. When the woman saw them, she was amazed, but her husband said, "Do you see, wife, did I not tell you?" The marét had planted on his clearing.

Yakíbm had great supernatural power. Once he and his people were in the woods, suffering from hunger. They begged him to ask the marét for food. So Yakíbm sang to the marét, then went by himself into the forest, and brought all manner of victuals. But his people did not consider the food palatable, and when the marét through Yakíbm asked whether the Indians wanted more, they declined.

A woman and her six year old boy went into the woods. They had nothing to eat and wanted to gather fruits. The woman gathered caraguatá fruits and piled them up so as to be able to take them home. Then she went to another spot, where there were yakjtáig (cançação) fruits. Then the boy suddenly said, "Look, Mother!" In the midst of the forest there was a heap of fine gourds. Near and far there were no cultivated plots, nothing but woods. "I wonder who has brought these gourds hither?" the woman said. "I'll take some of them home at once!" Filling her carrying-net, she brought her findings home to camp, where she reported how she had obtained them. "It was the marét," said the people, "let us fetch some, too!" All of them fetched gourds and consumed them. At first they were a bit afraid the food would disagree with them, but nothing happened.

Entáñ's son, Rignbrú·k, said, "Father, I should like to smoke.[6] You have relations with the marét; beg them for tobacco for me." At night Entáñ sat down and sang. He begged the marét for tobacco, and they promised to bring him some the following morning. At daybreak they sent him for trial first a new, red tobacco pipe full of tobacco. Rignbrú·k lit it and found the tobacco excellent. The people now wanted to see a leaf of this species. So Entáñ brought one from the marét, as large as a banana leaf. When all had marveled at it, he returned it to the marét. In the entire district there was no tobacco.

A woman said, "I want to go into the forest alone and get honey even if I have no iron ax." She found a bees' nest half way up in a tree and started to chop at the cavity with a stone ax. Then behind her she heard a voice say, "Take this

6 Note that according to Maximilian, the Botocudo learnt to smoke from the whites (Maximilian von Wied-Neuwied, *Reise nach Brasilien in den Jahren 1815 bis 1817*, 2 vols., Frankfort am Main, 1821; vol. 2, p. 34). Manizer found them avid of tobacco, but adds that they do not plant it (*op. cit.*, p. 260).

iron ax!" She cried out in alarm and turned about in her fright: it was a marét holding out an iron ax toward her. Full of terror she ran away to tell about the incident at home. When the people heard it, they said she had been a fool to run away. They returned to the spot, but the marét was no longer to be seen.

The Botocudo render their word yikę̨gn into Portuguese as forte, "strong." As stated above, all Botocudo headmen were yikę̨gn; but not all yikę̨gn were headmen. Hąnát told me how the subsequent chief Biyá·n became yikę̨gn:

Biyá·n took his weapons and went alone to hunt in the forest. At that time he still lacked supernatural power. In the woods he met a large number of marét. They seized him, threw him up into the air, caught him again, and thus played at shuttlecock with him. At last one of them said that this was enough; they had merely acted in this way in order to give him power. Biyá·n went home in a daze and lay down. Then he began to sing. After that he went into the woods and the marét brought him a number of very large pineapples, which he distributed among his people.

Subsequently the marét even took him with them into their big house in the sky one day.

In addition to the ability of communing with the marét, yikę̨·gn persons have the power suddenly to transform themselves and others. This is illustrated by the following tales.

A man went into the woods to hunt. He killed a howling monkey, but it remained hanging high up in the branches of the tree. He came home and told his son that he had left the monkey in the tree. Then his son begged to be allowed to accompany him into the woods in order to fetch the kill. When the boy saw the monkey in the branches of the tree, he urged his father to climb up and throw the beast down, but the man objected that the trunk was too thick for climbing. But the son kept on begging until his father finally climbed up. On top he cut up the howler into little morsels and threw them down singly. The son called up to him to throw down the entire animal, but his father would not listen. Suddenly the trunk of the tree began to swell and its branches to tremble. Then the man turned into a crested eagle, his arrows grew into talons, and he flew off whistling. His son gathered together the morsels of flesh and went home with them.

A boy said to his father, "Go hunting and kill a monkey for me!"[7] His father was not inclined to hunt, but the boy would not let him in peace. Then the man lost patience and said he would make a monkey for him. "That I'd like to see," said the boy. So the man struck the ground before him with his hand and beckoned,

7 It is worth recalling that according to Maximilian (*op. cit.*, vol. 2, p. 29) monkeys are the favorite game of this people.

and forthwith a monkey appeared. The man killed and roasted it and gave it to the boy to eat. He bade him carefully collect the bones. He himself did not eat of the beast. "How are you able to make monkeys?" the son asked. "You'll see presently," said the father, "stand over there beside the bones!" When the son had done this, the man again struck the ground with his hand and beckoned. Then all the bones entered the boy's body and he turned into a monkey. At once he climbed a tree, and in vain his mother called to him to come down. He fled into the woods. Then the man transformed the mother into a small mammal (dyehém?; said to resemble an opossum).

At first only the Lizard couple were on earth. Their children had no mouths, but ate aborally. Lizard wished to alter this. He went into the woods. Four days later he returned with a lot of jahó (according to Raulino, mutum) eggs. He laid them down on the ground in a row and assembled all the children round them in a circle. He ordered them to shout only when the eggs would burst open. Actually, when this happened, they all shouted, for they had suddenly acquired mouths. Then Lizard told his children, "I have transformed you; now you must transform us." He and his wife lay down, faces downward, and allowed themselves to be painted by their children. Thereby they turned into lizards.

Those who are yikę́gn may supplicate the marét for remedies against sickness and may even acquire the power of resuscitating the dead. Amhioniṍ and his wife had many children, among them a daughter, whom they loved above all others. She died. As she was lying dead in the hut, her father had people call Tomhé, who was very yikę́gn, and begged him to revive the girl. Tomhé demanded some tobacco, which he held under the corpse's nose. He sang, and after awhile, the girl arose, was alive and well. She told her father to pay Tomhé well, for she had really been dead. Amhioniṍ paid Tomhé a large roll of tobacco.

The way in which the marét concern themselves on behalf of the soul after an individual's death will be described below.

Today there is not a single yikę́gn left.

The term yoñkyón is applied to a post three meters in height and of the thickness of a man's thigh. The wood is pau balsamo,[8] which has a red heartwood and white sapwood. At the top the post terminates in a human image about one meter in height, which is carved in such fashion that the smooth, cylindrical body is formed of the red heartwood, while the head, as well as the arm and leg stumps, are of the white sapwood. The face, uniformly turned eastward, is painted with red lines in urucú.

8 Professor A. R. Davis informs me that this is *Myroxylon toluiferum* H. B. K., a member of the Leguminosæ—R. H. L.

The statues represent marét; they indicate the site within the village where the marét descend from the sky in order to listen to the prayer of their protégé when he sings to them. In the village of the Čonvúgn and Nakpie—what is now the post of Guido Marlière—chief Muĭ´ erected such a statue in the anterior space, as ordered by the marét. Whenever Muĭ´ would sing before the statue in the afternoon, all the villagers, painted red, would assemble in a circle around him. Then from six to twelve marét would descend from the sky, gathering near the statue, but no one saw them except Muĭ´. Through his chants he induced them to watch over the village so that no harm should happen to its residents. Whenever Muĭ´ sang, he addressed the statue; however, the marét are not inside the yoñkyón, but stand unseen beside it, subsequently returning to the sky.

After Muĭ´'s death the statue fell down. When later the grass was burnt down on the site, Muĭ´'s sons—Pak and Mbogmám—saw that as the flames approached the recumbent statue a storm arose that drove them back. Then they put out the fire and once more set up the statue. There it remained standing until the Paraguayan author Martin Barríos during his stay at the post had the statue chopped down to be taken away by him.

In the long-abandoned aldea Krakatáñ on the upper Rio Mucury there were three yoñkyón—father, mother, and son. They remained until recently, when they were probably destroyed by Neo-Brazilians.

Seeing my interest in the matter, Hąnát and Mbogmám made a statue for me, the former having fashioned the last yoñkyón at Guido Marlière. They asked what I intended to do with it. When I answered that I would set it up in front of my house in Pará, they enjoined on me the necessity of making it face towards the east. They greatly regretted not being able to accompany me so that they might sing chants requisite for the occasion, which they alone still knew.

The marét have a chief, the oldest of them all, whom Mbogmám called Yekąn kren-yirúgn (Father White-Head), while Hąnát designated him as Borúñ kren-yirugn (White-headed Indian) or Borúñ yipakyúe (the Great Indian). Raulino called him Borúñ makniá·m (Old Indian). He lives in the sky, but somewhat apart from the marét. He never descends to the earth and, according to these two informants, has never been seen face to face by anyone. Raulino, however, declared that formerly some people had had direct communion with him.

Yekąn kren-yirúgn owns many tame beasts (dupréñ); when they bathe in the sky, they splash the water, so that rain falls on the earth.

It is Yeką̣n kren-yirúgn that at bottom controls all remedies against sickness. If someone is ill, the people call a yikę̣gn man, who sings in the afternoon (the proper time for intercourse with the marét), and the spirits listen. They go to their chief, Yeką̣n kren-yirúgn and beg him for medicines to give to their protégé, who then applies them to the patient.

If anyone has committed murder, Yeką̣n kren-yirúgn takes away his soul and keeps it captive in the sky. The culprit's body lives on below, but grows sick and feeble. Thus declared Muí́, who had seen imprisoned souls in the sky.

Despite all my inquiries my three informants were unable to tell me anything further about this chief of the marét. They disclaimed any knowledge of the characteristics ascribed by Manizer to Marét-khmakniam, who corresponds to Yeką̣n kren-yirúgn; or of his wife, the Russian ethnographer's "Marét-jikky."[9]

SOULS AND GHOSTS

Souls. Every adult has a series of souls (nakandyúñ), some people having as many as five or six. However, only one of them resides in the body, the rest remaining nearby. If a person starts on a journey, several nakandyúñ precede, others follow him. A child gets his first nakandyúñ at the age of approximately four, only gradually acquiring the rest. Antom-brõ is the one that brings the soul, inserts it into the body, and advises it how to behave. Concerning Antom-brõ I could learn only that he lived in the vicinity of the country known as Nak-Írám; he is certainly not to be identified with Yeką̣n kren-yirúgn. In sleep the nakandyúñ leaves the body and then has experiences (dreams) by itself. The loss of the nakandyúñ causes sickness.

Hą̣nát went into the woods to hunt. He met two sauá monkeys (mbrų̣kí́k) which he killed and carried home. On arriving he fell down unconscious. Then a number of female sauá monkeys came in the guise of pretty girls and wanted to take him away, but he offered resistance. Then he heard the shrieking whistle of the marét in his ears and forthwith the female monkeys let him go. However, he fell sick, for they had abducted his nakandyúñ. They came back in human form and teased Hą̣nát. At last three marét appeared at the door of the house. They drove the monkeys away and took Hą̣nát to their land in the sky, where they returned his nakandyúñ. They also gave him a drink and he was completely restored to health.

9 Manizer (*op. cit.*, pp. 267-270) describes the spirit chief as a palm above the ordinary man's height, and having an immense member fatal to women. His head is all white, his face covered with red hair as far as the eyes. He sends rain and storms, but is kind to the Indians and angry when they are maltreated. It was he that instituted the use of labrets and ear-plugs, and certain songs are his.

A girl named Pą̃ngą́n was very fond of agouti flesh. Once she ate of an agouti that was really a transformed manyakeyĺ. The manyakeyĺ are people who live in the south, in houses like those of the Portuguese. Pą̃ngą́n's body remained where it was, but the manyakeyĺ took her nakandyúñ along and locked it up. Then her body began to grow sick. When her mother Yamnáik noticed this, she had people call Kadnyék who was yikę́gn: he was to see what could be done. Kadnyék went to the manyakeyĺ and saw Pą̃ngą́n's captured soul. He called it away on the pretense of wishing to show it something and abducted it in an auto *(sic)*. Taking it home, he allowed it to enter Pą̃ngą́n's body, and she recovered.

Before the body's death the nakandyúñ dies within it. When Muĺ was suffering from his last illness, he said that he had seen his nakandyúñ die and the marét bury it; and that now he knew definitely that he was about to die. A short time after this his prediction was verified.

The other nakandyúñ of a dead person accompany the corpse to the grave and soar above it weeping and invisible. They no longer eat anything and would ultimately die if the marét did not take pity on them and carry them to the land Nak-Ĭrám, White Country, in the sky. Thence they nevermore return, and no living person can ever get there. They have no significance whatever for the living.

A resurrection not due to a yikę́gn was described as follows:

A man with his wife and three children was living apart from other people. He fell dangerously ill and died several days later. His wife mourned him, one of his sons buried him, and then they all moved away.[10] One day one of the sons returned to his father's grave and saw a raving wild pig there. He wanted to kill it, but it began to speak like a human being. "Don't kill me, I am your father!" Therewith he assumed human shape. "I have come back," said the resuscitated man, "the wild pigs have brought me back from the underworld." Then the son wanted to see the wild pigs. His father called, and one beast appeared, which he had his son kill. Then he asked where his family was now living, and they went home with the game. He let his family eat of the pig but would not take any himself. He advised his son not to kill a snake if he should meet one while traveling.

Ghosts. From the bones of the corpse the nandyóñ (ghost, spook) forms, i. e. the nandyóñ yuką̃-krinã́ from the fresh bones as soon as the flesh has putrefied, while from the old bones there develops the nimhią̃-nié, recognizable by its long hair, which progresses by lengthy jumps. Other forms of nandyóñ,

10 Maximilian (*op. cit.*, vol. 2, p. 56) speaks of the quick burial of a dead person in or near the hut, which is then abandoned.

according to Raulino, are the nandyóñ-rõn (long nandyóñ) and the nandyóñ-him (black nandyóñ).

The nandyóñ reside in kiyém pará·dn, which lies under the earth where the sun shines while it is night above ground. There the nandyóñ spend their existence more or less like living human beings. The marét do not allow them to return permanently to the earth and chase them away as soon as they appear. Nevertheless it happens occasionally that the nandyóñ appear to the living. Unless the person who sees the apparition courageously kills or at least vigorously thrashes it, his death might result. Women are for that reason especially imperiled by such apparitions. However, in the first of the following tales even a woman has such an encounter without suffering evil consequences. A slain spook instantly vanishes.

A woman said to her husband once: "Stay here, they are calling me into the forest!" When she followed the call, she found the nandyóñ in the woods. They painted the woman with black pigment. When she got back, she told her husband, "This is the dress the nandyón have given me." She was able to don and doff the paint as though it were a dress.

A group of Indians once encountered hunters of a hostile tribe in the woods. They fought and killed one of them. Some time after this a man from the same band went hunting. He told his wife he would stay away three or four days; in the meantime she was to sleep with her mother. The man again met the same enemies, who killed him. After the lapse of four days the woman decided to sleep in her own hut and to await her husband there. In the darkness of the night his nandyóñ came to her in the hut. He lay down, saying, "Louse me!" She stirred the fire and laid the ghost's head on her lap. Then she saw that it was teeming with maggots and realized that it was her husband's ghost that had come. At once she fell dead, and the nandyóñ vanished.

There was a widow whose husband had been killed. She left her children home and went into the woods to gather caratinga roots. She put the collected roots down in a heap and took her carrying-net farther up the mountain in order to gather still more there. When she came back with her load she heard voices at the spot where she had left the first caratingas. There were two nandyóñ. They had kindled a fire and were about to roast the roots. When the widow got there they seized her and thrashed her. She dragged herself home, told her children what had happened and died shortly after.

A man went to a rock to gather caraguatá fruits, which were growing on the heights. He leaned his bow and arrows against the cliff and climbed up. When he had gathered enough caraguatá, he descended with his load. Then he saw below him a female nandyóñ handling his weapons, fitting one arrow after another to the

string and trying to shoot at the man, but in vain. Then the man grew angry. "What are you fooling with my weapons for?" he shouted at her. He cut off a stick and flogged her with it till she remained lying on the ground. Then he took his belongings and went home.

There was a man named Entáñ. He said to his wife: "Let us go into the woods to look for honey!" She answered, "Go alone!" He took his ax and went. He looked a long while till he found a bees' nest at the foot of a tree and began chopping it open. Then he heard a call. Thinking it was his wife, he replied. He pushed the bees swarming around him away from his ears and listened. Then he saw that a nandyóñ came toward him. Entáñ grew vexed. "What is he looking for at this very moment?" He chopped off a stick and thrashed the ghost. "So you won't annoy me again when I am looking for honey," he said. Then he went home and told the people he had thrashed a nandyóñ. Then he began to sing like a howling monkey. The people wondered greatly, but he said, "The marét so ordered me." Then he went into the forest to the marét and brought food from there, and all ate.

The same Entáñ went out with many others to hunt in the forest. They camped for the night and slept in a long line on the ground, each one with his feet toward the fire. Entáñ was lying in their midst. He woke up while the others were asleep. Then he heard some one coming. He called out, but no one answered. It was a nandyóñ who went to the fire, took up a brand, and went back to the woods. Entáñ said nothing, but decided to kill the nandyóñ if he came again the following night. He made a club for himself, put it by his resting-place, and lay awake. When the others had fallen asleep, the nandyóñ came again to fetch fire. When he stooped over to pick up a brand, Entáñ struck him down with his club and killed him. When the fire of the nandyóñ goes out in the underworld, they fetch a brand from a fire of the living.

A woman said to her husband, "Let us move!" He answered, "Then go ahead!" She packed the carrying-net and went. After a while her husband followed. On the way he met two nandyóñ. One of them at once attacked him, but the man wrestled with him and hurled him aside. Then the other yelled, "Hold him tight; don't let him escape!" The first one again attacked the man, who however wounded him with his knife and hurled him aside, so that he remained lying dead by the road, while his companion fled. When the man got back to his wife and told her he had killed a nandyóñ, she said, "The nandyóñ are dangerous! You have killed one; now you will probably have to die." But nothing happened to him.

In contrast to the Kamakã and Mašakarí, the Botocudo do not believe in the tendency of the souls of the dead to turn into man-eating jaguars. Only after repeated inquiries I got to hear the following tale:

A man was once camping in the woods with his wife. Then she begged him to leave her alone until she should call him, saying that she wanted to transform herself. She painted herself and turned into a jaguar except that from the shoulders up she remained human. Then she called her husband to her, and he was astonished at her transformation. "How can I now live with you?" he asked. She let him wait and ran into the forest, where she killed two pigs. One she brought to her husband, the other she dragged to one side and devoured by herself. She thus continued to bring game to the hut, but would not permit him to approach her. One day her head, too, turned into a jaguar's; now she was a beast all over. She ran to a site in the woods where many Indians were camped and ate every one of them. A boy who went looking for his father, who had been of the party, found nothing left of them and remained in the woods all alone.

CONCEPTIONS OF NATURE

In ancient times there was no night. A man came down from the sky and said to the people: "If you wish, you may kill me!" They killed him. Then night came. After a while he revived; then day came again. He went up to the sky where he came from and is now the Sun.

Eclipses arise when Sun and Moon quarrel and call each other names. Then they turn black with rage and shame.

The Sun is male. The great (*not* the waxing) Moon is male, munyá·k yekạ̃n (Father Moon); the small Moon is female, munyá·k yopúe (Mother Moon).

Luminous meteors are called Hatarán-yokéa, "arára tail."

The Origin of Thunderstorms. Tarú (Sky; *not* to be identified with either Sun or Yekạ̃n kren-yirúgn) had a wife and a daughter married to Ñgạ̃n-nhin. At that time they were living on the earth. Tarú had an otterskin called kriñ-pakyúe, which owned the secret of the upper world. Then Tarú wished to collect sapucáyas,[11] he took the skin along and hung it up. His son-in-law also wished to go to collect sapucáyas and asked to be allowed to take the otterskin along. Tarú finally consented, but admonished him to clean the site in the woods round about where he would hang it up. Ñgạ̃n-nhin went to a sapucáya tree and suspended the skin, but did only a little superficial cleaning in the vicinity. He ascended the tree and began to throw down the fruits which

11 The nuts of *Lecythis ollaria*, contained in capsules. "At the top of the vessel is a circular hole, in which a natural lid fits neatly. When the nuts are ripe this lid becomes loosened, and the heavy cup falls with a crash, scattering the nuts over the ground" (H. W. Bates, *The Naturalist on the River Amazons*, 2 vols., London, 1863, vol. 1, p. 67).

fell pã-pã! on the ground in the woods. Then the otterskin began to move and rage around the trunk from which it was hung, beating against the trees with a rattling, thundering sound. A great storm rose, and from the ground under the tree the water came gushing forth. It rose very rapidly, but Ñgą̃n-nhin did not care about that. He threw down more and more sapucáyas and they dropped into the water tũ-tũ! Suddenly he noticed that the water was reaching his seat. Then he began to cry and scream. The water carried him with the otterskin up to the sky. At last the marét took pity on him and let him enter the sky. There the otterskin remains to the present day. When it moves in the sky, it thunders and the water begins to overflow; then it rains on earth.

In the beginning there were no storms. The sky was so close to the earth that one could enter it from the earth; but at that time earth and sky separated.

Water. (a) The great snake Nyukuá·dn is lord of the water and causes floods. It signals the rain to descend by means of the rainbow (nyukua·n-imbyę́gn, "urine of the great snake").

(b) The only one on this earth who had water was Hummingbird (holo-keyún). All others drank nothing but honey. Hummingbird bathed every day. The others also wanted to have water. They sent the mutum to trail Hummingbird when he went bathing, but Hummingbird went so fast that the other lost sight of him.

The people assembled one day and made a fire. Irára Yopúdn came last, for he had been collecting honey. In a low tone of voice he begged, "Give me water." "There is no water here," they answered. Then he offered Hummingbird his honey for water, but he declined to exchange. While all were still standing round the fire, Hummingbird said, "I am going bathing." Irára trailed him, sticking close to his heels. Almost simultaneously they got to the water, which was in a hole in a rock. Hummingbird jumped into the water, Irára immediately after him. He splashed it in all directions, and thus originated brooks and rivers.[12]

The Origin of Fire. Carrion Vulture (Ambéa) alone had fire. Mutum (Pandyį́) lay down in the middle of the road and played dead. The blow-flies

12 Among the Yaghan, Fox is the selfish hoarder, and Hummingbird discovers his supply of water (Martin Gusinde, *Die Yamana,* Mödling bei Wien, 1937, pp. 1207-1209). Compare the following Kaingang tale: "O beija-flor escondeu a agua em baixo duma pedra para que os outros não pudessem beber. Disse: 'Quero tomar agua no céu.' O Chekré, outro passarinho, achou a agua e 'pinchou' fora a pedra" (Herbert Baldus, *Ensaios de etnologia brasileira,* São Paulo, 1937, p. 60).

laid their eggs on him and he got full of maggots. Vulture came down and brought fire in order to roast Mutum. Mutum in a low voice said to the maggots, "Don't crawl into my ears, nor into my nose!" Young Carrion Vulture sat nearby and, seeing Mutum moving his eyes, he cried out, "Father, he is not dead; he is moving his eyes!" "No, he is dead," said the old bird, "why he is full of maggots! Wait, soon we'll eat him up!" Then Mutum seized the firebrand, jumped up, and fled. Carrion Vulture pursued him. Mutum came to Heron and asked him to hide the fire. He hid it in his carrying-net and made his wife sit on top of it. Carrion Vulture looked everywhere and, not finding the fire, went away at last. Then Heron took it out and hurled it in all directions so that now there is fire everywhere. When Carrion Vulture saw this, he decided to forego the possession of fire altogether and henceforth ate his food raw.

MISCELLANEOUS TALES

(a) Arára was giving a feast, during which Bat began quarreling with Mutum, Arára's brother-in-law, but got the worst of it. Arára asked, "Why is he quarreling with my brother-in-law? He shall be sorry for it." People were dancing. When the feast was over and Bat was going home, Arára stepped in front of him, barring his way. He wrestled with Bat, rent him asunder, and let him lie dead on the road. He cut off his nose, by which he might have been recognized and painted him to look like a mutum. Then the bats came. They saw the dead man and thought it was Mutum. "That's right," they said, "our kinsman has killed Mutum; let us eat him." So they built a fire, roasted their own kinsman and ate him up.

(b) Arára and his wife were walking in the woods looking for sapucáya fruits. For a long time they looked until at last they found a tree with fruits. When they wanted to gather them, the carrion vultures came, took possession of the tree, and drove off the aráras. The arára said, "Just wait, I'll take revenge!" Then the long hair the carrion vultures still had at that time dropped off and they became bald-heads.

(c) Anciently animals were like human beings, and none of them was evilly disposed towards the others. A magician came and gave them all food to eat. Then Irára had the idea of making them hostile to one another. He taught the snake to bite so as to kill or maim his victims; he taught the mosquito to suck blood. They turned into beasts, including Irára himself, so that no one should recognize him. When the magician came, he called the beasts to account, but there was nothing to be done to change things back. Then the magician transformed himself into a woodpecker, his stone ax turning into a beak.

(d) Among the monkeys there are some that are yikę̃gn and lead a double life, now as beasts, now as men; i. e. they are really human, but generally appear to other human beings only in animal shape.

Two men went hunting. They heard the howling monkeys howl and followed the sound. They saw a very large howler running to and fro on his branch. Both of them shot many arrows at him, but not a single one touched him. Suddenly he assumed human shape. He had a bow and a sheaf of arrows in his hands, and when the hunters again shot at him he returned their arrowshots, one of them wounding one of the hunters in the shoulder. Then the other said, "Now he has already wounded my comrade! I must kill him at all costs!" He aimed well and this time hit the howler, which tumbled down. He killed him completely and let him lie, for he felt obliged to carry his wounded comrade home as quickly as possible and treat him. When the wounded man was improving, he decided to go into the woods and see whether the howler's corpse was still lying there. But he found no trace of him. But on the spot there were several pottery sherds which had held food.

The ordinary howling monkeys eat fruits, but those which are yikę̃gn eat what human beings do.

(e) An Indian named Yatúñ went into the woods to hunt. He encountered a band of monkeys. Selecting the largest, he shot an arrow at it, but the monkey caught the missile in its hands, turned it round, and hurled it back at Yatúñ, seriously wounding him. He dropped his weapons and dragged himself homeward, where he died shortly after.

(f) [Note: Thinking that the Botocudo might stand in the same superstitious awe of the jaguar as the Kamakã and Mašakarí, I repeatedly asked my informant Hą̃nát to tell me stories about this animal. However, I soon discovered that in Botocudo belief the jaguar did not by any means loom as a supernatural being. Their tales do not reveal that excessive terror of the beast indicated in the relevant Kamakã stories. Except for one solitary instance they are pure hunting tales.]

Katnáp had been gathering antóm larvæ and wanted to eat them. He therefore asked a relative for some bananas to eat with the antóm, but the kinsman refused. So Katnáp took bow and arrow and went to fetch bananas himself. He filled his carrying-net with them, put it on his back, and went homeward. On the way he found a thin branch with three twigs evenly projecting from the same point. He cut it off in order to make a tip for his bird-arrow (monhẽyá·k) out of it. Then a jaguar, which had been lying in ambush, jumped at him. Katnáp threw off his carrying-net, jumped aside, and discharged an

arrow, but the jaguar did not mind it even though it had struck him. Again and again he leapt at the man, who always managed to elude him and kept on shooting his arrows till the jaguar was studded with them. When he had got rid of all his arrows, the jaguar jumped at the back of his neck and killed him. He ate half of him, let the remainder lie there, and ran off.

When Katnáp had not returned by the next morning, his relatives sent a man named Noñ to look for him. He found the site of the fight, the carrying-net, and the remains of Katnáp's corpse. When he returned and narrated what had happened, all of them gathered and went out with dogs to kill the jaguar. The dogs found his tracks and drove him to bay. They attacked him until he was quite exhausted. Then the strongest of the men jumped at the beast and wound his arms round him. All the Indians helped, overpowering the jaguar, and tied him up alive. Then they built a big fire and burnt him alive.

A relation of Katnáp's beat up the man who had refused to give bananas to him and took away his wife.

(g) Beréñ went into the woods to hunt. He had painted his arrows with urucú in order to make them more effective. He got to a spot where a tapir had been feeding the night before. While he was looking at the tracks, a jaguar appeared and jumped at him. Several times Beréñ evaded the attacks; twice he shot at the jaguar and wounded him. Then he climbed a tree. The wounded animal restlessly ran about under the tree, then finally went away. After a while Beréñ climbed down and followed his tracks. Soon he saw the jaguar lying on the ground. Then he again climbed a tree and waited for the flies to swarm round the animal to make sure it was dead. He descended and called his people thither. They skinned the jaguar and ate the flesh.

(h) A man went into the woods to gather caraguatá fruits. He got to an open space, where there was only a spiny jaracatiá tree. There a jaguar appeared and jumped at him. The man leapt aside, but the animal kept on jumping. The Indian yelled as loud as possible. He looked round for a tree on which he might save himself, but the only one in sight was that jaracatiá. So he climbed it regardless of its spines. The jaguar lay down under the tree and waited. The man threw branches at him, but he remained there. At last another hunter answered the call of the endangered Indian. Then the jaguar got up and followed the other voice, but the man climbed down and went home.

(i) Pogné went into the woods to lie in ambush by a pitangueira tree, waiting for game animals that would come to feed on the fruits which had dropped from it. While there, he was attacked by a jaguar. He evaded its leaps several times and finally found refuge on a tree. But this was dry and

broke down at the root under Pogné's weight. Pogné screamed aloud as he toppled down to the ground with the tree. Then the jaguar grew suspicious and fled. Pogné went home.

(j) An Indian was hunting alone in the woods. He noticed a crowd of unknown Indians under a gamelleira tree. They were the man-eating Tombrék. Their chief was absent. When the hunter approached, they seized and killed him, cut open his corpse, and the women took out his entrails, which they carried to the stream to wash, while the men dissected the body.

Then the chief returned. He examined the skin color of the slain man, which was dark, and said, "Why did you kill him? He is a mulatto!" [He did not want his people to kill mulattoes, but only whites.]

Then the Tombrék said, "You are so powerful; restore him to life then!"

So the chief had them bring back the entrails and had them deposited by the slices of flesh. He sang, and the man got up and remained standing upright. The chief bade him go; he took his bow and went home.

(k) A man was roaming about the forest with his boy. They met the Poyekrę̂gn, who abducted the boy. His father came home alone. His kin said, "You ought to try to bring the boy back."

So the man returned to the forest. He gathered plenty of pretty little flowers and decorated himself with them. Then he lay down beside the path of the Poyekrę̂gn. They came, the boy in their midst. They had painted all his body black with genipapo. He saw the flowers and asked for permission to fetch them. When he got there, his father seized him by the arm and took him home. He washed him until the black pigment disappeared.

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